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The communicating rudimentary horn of the unicornuate uterus as a rare localization of a partial hydatidiform mole and the diagnostic challenge

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Background & aims: A unicornuate uterus with a rudimentary horn, with an incidence of 0.06%, is the consequence of an anomaly during the development of Mullerian ducts. This carries significant pregnancy risks, especially when implantation occurs in the rudimentary horn. A pregnancy complication characterized by an abnormal growth of trophoblasts, such as molar pregnancy is rare at this location. This case-based article aims to emphasize the rarity and the methods of diagnosis of a unicornuate uterus and a hydatidiform mole.

Method & results: An 18-year-old woman referred to our hospital due to a typical missed miscarriage. She underwent a transvaginal ultrasound, during which cervix and two separate structures connected by a narrow canal corresponding to the body of the uterus were visualised. The miscarriage was located on the right side but the connection between the right uterus and cervix was not visible. The suspicion of a unicornuate uterus with missed miscarriage in the communicating rudimentary horn was raised. She was qualified for laparohysteroscopy where this diagnosis was confirmed. The rudimentary horn with the miscarriage and the right fallopian tube were excised.

Unexpectedly, after 2 weeks, histopathology revealed in the removed tissues a partial hydatidiform mole surrounded by uterine tissues. The patient was followed as per standard protocol and beta-human chorionic gonadotrophin became undetectable after 8 weeks.

Discussion& conclusions: A unicornuate uterus with a communicating rudimentary horn is an uncommon type of uterus and an extremely rare location for molar pregnancy. Vigilance should be exercised during ultrasonography, which is helpful in the primary diagnosis but the method confirming this anomaly is laparohysteroscopy. In contrast, a hydatidiform mole is relatively difficult to detect by imaging tests, and histopathology plays a key role in the final diagnosis.

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RESECTOSCOPIC SURGERY: A 5-YEAR AUDIT OF OVER A THOUSAND PROCEDURES AT A CENTRAL HOSPITAL

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Introduction and aimsof the study: Endometrial polyps and submucous myomas are two of the most frequent pathologies in Gynaecology. Resectoscopy is a surgical technique performed in order to treat these pathologies, allowing access to the uterine cavity, confirmation of the diagnosis and removal of the lesions at the same operative time. Sometimes this technique is performed an incomplete or unsuccessful office hysteroscopy, and it is frequently performed in an outpatient setting.

The aim of this study is to investigate which are the most frequent indications and the respective histological findings and the procedure's complication rate.

Methods: Authors looked into patient data files of all women who underwent resectoscopic surgery at the Department from January 2018 to December 2022. Variables such as age of the patient, size of the lesion, histology, duration of the surgery and complication rate were taken into account. All surgeries were performed by experienced surgeons with bipolar energy, under general anesthesia or sedation.

Results: During the study period, 1374 resetoscopies were performed. The main indication was the removal of endometrial polyps (70.6%), followed by myomectomy (16.7%). In 24 cases there was severe cervical stenosis and access to the uterine cavity was not granted. There were 20 cases (1.5%) of endometrial hyperplasia without atypia, 15 (1.1%) of endometrial hyperplasia with atypia and 23 (1.7%) of endometrial carcinoma. The complication rate was low (3.5%), with uterine perforation and/or false route being the most frequent complications.

Conclusion: This study confirms the high effectiveness of this minimally invasive surgery, associated to a low complication rate in experienced centres. It remains a valid option mostly for big or complex lesions in patients with a difficult access at the office hysteroscopy setting.

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Metabolome analysis as a potential source of biomarkers in endometriosis

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Introduction and aimsof the study: Endometriosis is a disease that affects approximately 190 million women. There is a demand for developing a non-invasive diagnostic tool of endometriosis. Diseases cause disruption of biochemical pathways leading to a metabolic fingerprint characteristic of its site and nature. This makes metabolomics a powerful tool for development of biomarkers. Thus, the aim of our study was to analyse the differences in metabolomic profile of endometriosis patients and controls.

Methods: A multicenter, cross-sectional study, was conducted between 2018-2019 in Poland. Plasma (P) and peritoneal fluid (PF) were obtained from women undergoing laparoscopy. The diagnosis of endometriosis was based on visual and/or histopathological assessment of the postoperative material. We analysed 73 P samples and 54 PF samples obtained from women with endometriosis and 35 controls. Samples were analysed with LC-MS/MS and FIA-MS/MS using Waters Acquity Ultra Performance Liquid Chromatography coupled with Waters TQ-S triple-quadrupole mass spectrometer.

Results and discussion: In the P samples we observed lower concentration of some aminoacids (tryptophan), amines (kynurenine), glycerophospholipids (lysoPC a C18:2 and lysoPC a C20:3) and higher concentration of some acylcarnitines (C2, C3-DC, C14:2-OH, C16-OH, C16:2-OH), glycerophospholipids (lysoPC a C24:0, lysoPC a C26:1, and PC aa C30:0) and sphingolipids (SM C16:0) in endometriosis. In the PF samples we observed lower concentration of acylcarnitine C0 and higher concentration of some other acylcarnitines (9 different compounds), glycerophospholipids (19 different compounds) and sphingolipids (4 different compounds) in endometriosis. This is a preliminary study. The statistical significance of the differences observed requires investigation with larger sample cohorts and with the use of additional methods.

Conclusions: Observed metabolites may be potentialy valuable candidates for biomarkers of endometriosis. A broader analysis of the results may contribute to obtaining diagnostic profiles of women with and without endometriosis or even to assess the severity of the disease.

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UROCORTIN 1 (UCN 1) as a possible biomarker in differentiation of endometriosis stage and distinguishing its deep infiltration phenotype

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Introduction and aims of the study: Endometriosis is a chronic, estrogen-dependent disease characterized with the presence of endometrial tissue outside the uterine cavity. Its etiology is multifactorial and depends on coexistence of immune, genetic, as well as environmental factors. Due to the Urocortin 1 (Ucn1) expression in various parts of the female genital tract i.e. endometrium, its role in disease pathophysiology is suspected. The aim of our study was to investigate the concentrations of Ucn1 in blood and peritoneal fluid samples in women with endometriosis and to find correlations between Ucn1 and immune cells or cytokines.

Methods: We enrolled 54 patients with endometriosis and 20 healthy age-matched controls. In both groups serum Ucn concentration (ng/ml) was measured and additionally in patients with endometriosis Ucn level (ng/ml) was assessed in peritoneal fluid. All measurements were performed by using enzyme-linked immunosorbent assay (ELISA). All immune cells populations were analyzed using flow cytometry.

Results and discussion: The mean[a] serum Ucn1 concentration in women with endometriosis was significantly higher 11.8 (7.3 – 16.7) ng/ml, compared to the control group 3.5 (2.8 – 5.3) ng/ml, ($p < 0.001$). The mean serum Ucn1 concentration in the group of patients with deep infiltrating endometriosis (DIE) was significantly higher 16.2 (11.6 – 22.1) ng/ml in comparison to group of patients, who did not presented DIE phenotype - 10.8 (7.0 – 15.9) ng/ml, ($p = 0.030$). Additionally higher serum Ucn1 concentrations predisposed to occurrence of more advanced endometriosis stage ($p = 0.031$).

Conclusions: Obtained results suggest that high levels of serum Ucn1 concentrations correspond with higher endometriosis risk, greater probability of more advanced endometriosis stages, as well as may be considered as a biomarker of deep infiltrating endometriosis.

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Prevalence of adenomyosis in women undergoing hysterectomy in a greek secondary hospital - a retrospective study

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Introduction and aimsof the study: To describe the prevalence of adenomyosis in hysterectomy specimens and its correlation to the respective indication of hysterectomy

Materials and methods: All surgeries have been performed in the same gynecological department of a Greek secondary hospital. In this retrospective study we analyzed the overall rate of adenomyosis via histological proof by the pathologist.

Results: A total number of 275 hysterectomies (both abdominal and vaginal) were performed between 2015 and 2021. Adenomyosis was diagnosed via histopathology in 90 hysterectomy specimens i.e. prevalence 32.72%. The mean age of all patients included was 56.3 years. In the subgroup of patients undergoing abdominal hysterectomy ($n = 209$), adenomyosis was found in 34.45% of patients. In the “abdominal subgroup” 52.3% of women were postmenopausal at the time of surgery. Patients with histological diagnosis of adenomyosis in the “abdominal subgroup” were further categorized by the indication for hysterectomy. Abnormal uterine bleeding/uterine fibroid was the indication for hysterectomy in 59.73% of patients with histological proof of adenomyosis, in 25% surgery was performed due to ovarian mass/tumor. Cervical dysplasia and uterine cancer were indications for hysterec-

tomy, regarding patients with adenomyosis found by pathologic examination, in 8.33% and 6.94% respectively. In the subgroup of patients undergoing vaginal hysterectomy (n = 66) due to uterine prolapse, adenomyosis was identified in 27.27% of patients. All patients in the "vaginal subgroup" were postmenopausal at the moment of surgery.

Conclusions: Our data shows that adenomyosis can be found in 32.72% of hysterectomy specimen. Corresponding studies from the existing literature, shows similar or even higher rates of adenomyosis during pathological examination.

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Differences in endometrial and cervical microbiome of uterine fibroids patients – a preliminary study

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Introduction: Uterine fibroids (UFs) are the most common pelvic tumors in women of reproductive age.

Risk factors for UFs appear to be age, obesity, low vitamin D levels, endo- and exogenous hormonal factors. According to available data UFs may be associated with a dysbiosis of genital microflora. The association of dysbiosis of the uterine cavity and endometrium with immune dysregulation is highly likely.

Material and Methods: Seven patients were included in preliminary study (median age 41, +/- 11), 3 with UFs and 4 with uterine polyps as control group.

Microbial genomic DNA was extracted from biopsy specimens of uterine fibroids, polyps and endometrium not affected by lesions and cervical swabs samples. The 16S rRNA gene sequencing on Ion Torrent platform was used to analyze endometrial and cervical microbiome (CM). Data analysis was performed using the software Mothur.

Results: Finegoldia and Croceicoccus taxa were more represented in UFs biopsy specimens in comparison to endometrium tissue not affected by lesions. In turn, Lactobacillus, Rheinheimera, Staphylococcus, Flavobacterium, Corynebacterium, Streptococcus and Anaerococcus taxa were less abundant. Both, Shannon, and Chao index of cervical microbiome bacterial diversity were higher in UFs patients in comparison to control group. Changes in the abundance of specific types of bacteria in CM were observed. Lactobacillus taxa was the most common bacteria in all CM. At relevant taxonomic level, 3 bacterial taxa including Fusobacterium, Allorhizobium-Neorhizobium-Pararhizobium-Rhizobium and Moraxellaceae_unclassified (pval 0,06) were more represented in UF positive patients' group.

Based on CM changes, significant differences in metabolic pathways were predicted.

Conclusion: A trend of bacterial modifications in endometrial and CM of UFs patients was noticeable. Research showed differences between patients with and without UFs in the uterine cavity microbiome. This requires further research, also considering population differences.

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Evaluation of laparoscopic cervicosacropexy on sexual function in women with pelvic organ prolapse

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Introduction: Sexual health is an essential component of women's wellbeing. Women with pelvic organ prolapse (POP) often suffer from sexual dysfunction. A variety of surgical techniques are used to repair prolapse and discussed in literature in relation to the quality of sexual life. Since laparoscopic cervicosacropexy is regarded as the gold standard in the treatment of apical prolapse, it is also reasonable to analyze its effects on sexual function.

Aim of the study: The aim of the study was to evaluate the influence of laparoscopic cervicosacropexy on sexual activity and function in women with POP

Methods: The study included 48 women with POPQ ≥IIC (sexually active- 32 and inactive- 16) who underwent laparoscopic cervicosacropexy. Sexual function was assessed using the Prolapse/Urinary Incontinence Sexual Questionnaire, IUGA Revised (PISQ-IR)—a condition-specific, validated and reliable instrument that evaluates sexual function in women with UI and/or pelvic organ prolapse (POP). The questionnaire was completed before and 6-12 months after the surgery.

Results: In the orgasm/arousal domain, sexually active patients demonstrated improvement in orgasm intensity ($p < 0,01$) as well as lower frequency of pain during sexual intercourse (ns). They did not report improvement in the partner related domain. It was also observed that cervicosacropexy improved self-esteem, lowered embarrassment, frustration and annoyance in the condition impact domain ($p < 0,01$). In the condition-specific domain, lower shame during sexual activity was reported.

In sexually inactive patients we demonstrated that cervicosacropexy eliminated pelvic floor disorders as a cause of lack of activity.

Conclusion: Our outcomes suggest that laparoscopic cervicosacropexy improves the quality of sexual life primarily through increasing self-esteem and self-confidence without changes in domain connected with partner and desire.

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Association of endometriosis with cancer

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Introduction and aim: Endometriosis is a chronic inflammatory gynecologic disease affecting up to 10% of women of reproductive age, with considerable negative effects on female health, including a possible elevated risk of cancer. The aim of the present study was to review the epidemiological data on the association of endometriosis with various types of cancer, emphasizing the findings of relevant meta-analyses in order to evaluate the highest level of evidence in the medical literature.

Methods: PubMed and Cochrane databases were searched for clinical studies examining the epidemiological association of endometriosis with

cancer and five eligible meta-analyses published between 2012 and 2021 were identified and included in this review.

Results: The combined results of the meta-analyses revealed statistically significant positive associations of endometriosis with ovarian cancer risk overall (RR = 1.93, 95%CI: 1.68-2.22, 24 studies), (RR = 1.96, 95%CI: 1.68-2.29, 25 studies), (OR = 1.42, 95%CI: 1.28-1.57, 12 studies), (RR = 1.27, 95%CI: 1.21-1.32, 21 studies), (OR = 1.46, 95%CI: 1.31-1.63, 13 studies), and particularly with clear cell (RR = 3.44, 95% CI: 2.82-4.42, 5 studies), (OR = 3.05, 95%CI: 2.43-3.84, 13 studies), and endometrioid histotypes (RR = 2.33, 95%CI: 1.82-2.98, 5 studies), (OR = 2.04, 95%CI: 1.67-2.48, 13 studies). In addition, an increased risk of thyroid cancer (RR = 1.39, 95%CI: 1.24-1.57, 5 studies), and a marginally elevated risk of breast cancer (RR = 1.04, 95%CI: 1.00-1.09, 20 studies) were shown. In contrast, no increased risk of colorectal cancer (RR = 1.00, 95%CI: 0.87-1.16, 5 studies), endometrial cancer (RR = 1.23, 95%CI: 0.97-1.57, 17 studies), (RR = 1.18, 95%CI: 0.88-1.58, 9 studies), or melanoma (RR = 1.17, 95%CI: 0.97-1.41; 7 studies) was documented. Finally, the data showed a negative association with cervical cancer (RR = 0.68, 95%CI: 0.56-0.82; 4 studies), (RR = 0.67, 95%CI: 0.54-0.84; 3 studies).

Conclusions: The above data provide evidence for the association of endometriosis with an increased risk of ovarian and thyroid cancer, with a modest increase in breast cancer, and additionally with a decreased risk of cervical cancer.

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Circulating microRNAs Mi 517 and Mi 526 as novel biomarkers in the detection of hypertension and preeclampsia in first trimester

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Background: Up to 10% of pregnancies can become complicated by hypertensive disorders of pregnancy, which include preexisting and gestational hypertension, eclampsia, and preeclampsia. MicroRNAs have been observed to play a major role in various physiological processes, for instance programmed cell death,cell division, pregnancy development, and proliferation.

Objective: The focus of the current study has been on analyzing diagnostic potential of MicroRNAs Mi 517 and Mi 526 as biomarkers in the detection of hypertension and preeclampsia in the first trimester.

Methods: Serum microRNA profiles of pregnant women are different from those of non-pregnant women. With the help of profiling of microRNAs in the serum of pregnant women, it is possible to link alterations in their concentration to the emergence of gestational problems. In the present study, 53 patients in the first trimester of a singleton pregnancy, 25 pregnant patients in the study group and 25 in the control group has been considered.

Results: The findings of the current study has revealed that R517s and R526s act as major indicative biomarkers for the detection of hypertension and preeclampsia in first trimester.

Conclusions: In the conclusion it can be stated that pregnant patients' use of biomarkers like C19MC MicroRNA would help define pregnancy monitoring and put therapies into place. In this work, the circulating C19MC MicroRNA was examined as a potential early indicator of preeclampsia and hypertension in pregnant individuals.

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ANGIOGENIC FACTORS ASSOCIATION WITH RISK FACTORS OF HYPERTENSIVE DISORDERS OF PREGNANCY

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Introduction and aimsof the study: Placental growth factor (PlGF) and soluble fms - like tyrosine kinase – 1 (sFlt - 1) became targets of research in prediction of adverse outcomes, diagnose and progression of hypertensive disorders of pregnancy (HDP). However, sparse research has studied association between these markers and risk factors of HDP. The aim of our study was to analyze risk factors prevalence in HDP and find out about their association to angiogenic factors.

Methods: 28 women with HDP participated in our research. 19 women with preeclampsia and 9 with gestational hypertension. Characteristics of risk factors and blood samples for sFlt-1, PlGF and their ratio analysis were obtained in the second or third trimester of pregnancy.

Results: Nulliparity and in vitro fertilization were more prevalent in preeclampsia group. Other risk factors such as smoking before pregnancy, obesity and preexisting diabetes mellitus/impaired glucose tolerance were more prevalent in gestational hypertension group. In preeclampsia group nulliparous women had higher levels of serum sFlt-1 (p = 0.017) and higher sFlt-1/PlGF ratio (p = 0.046) compared to multiparous. In preeclampsia group non obese women had higher sFlt-1 and sFlt-1/PlGF compared to women with BMI≥30 measured before pregnancy. Smoking before pregnancy, preexisting diabetes mellitus/impaired glucose tolerance and in vitro fertilization did not affect angiogenic factors concentration in preeclampsia group.

Conclusions: Risk factors were more prevalent in gestational hypertension group. In preeclampsia group serum sFlt-1 levels and sFlt-1/PlGF ratio were higher in nulliparous women and lower in women with obesity. There was no statistically significant association of angiogenic factors with other risk factors.

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Severe early PET secondary to undiagnosed Gestational Trophoblastic disease (GTD) in low risk patient (LRP)

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Objective: Raise awareness of placentally mediated hypertensive disease secondary to triploidy which can present dramatically before 20 weeks.

Case report: This 29 year old woman presented at 19 + 2 with oedema and a blood pressure reading of 180/110 checked by her sister-in law, a GP. Her previous obstetric history was of 4 normal vaginal deliveries at term 7, 5, 3 and 1 years ago. Her BMI was 21 and she was fit and well excepting mild asthma. Her dating scan had been undertaken out of area, but there had been no concerns and she had declined trisomy screening. An intrauterine death was diagnosed on presentation. Urinary testing revealed a PCR of 1113mg/mmol ACR of 456.1mg/mmol. Blood tests were normal excepting a Creatinine of 94 umol/L and an albumin of 28g/L. Her blood pressure was stable in the 140s/100s on tds labeto-

lol. She opted for medical management. After misoprostol she bled heavily and was taken to theatre, having bled 2.1 litres briskly in the room with a non-dilating 1cm cervix. She had a general anaesthetic and underwent a vertical hysterotomy with uterine evacuation. Total blood loss was 3.2 litres. She was delivered of a macerated fetus, of otherwise normal appearance, and a grossly abnormal cystic placenta. A placental growth factor level was reported (on the biochemistry at presentation) after delivery, as 49pg/mL and the s-flt was 35498 pg/mL giving a ratio of 724. Cytogenetics revealed triploidy and histology confirmed partial molar pregnancy. At three weeks postnatally her ACR had improved to 4mg/mmol and had ANAb at an IgG titre of 1/160 and positive Ro52 and Ro60. To my knowledge, HCG testing remains outstanding.

Discussion: This was an unusual case as this woman was a priori at very low risk of morbidity. The case demonstrates that abnormal placentation does drive pre-eclampsia in women of normal cardiovascular status - there is a spectrum of causation. Use of angiogenic factors as diagnostic aids will continue to grow.

Conclusions: Particularly in a parous woman without cardiovascular risk factors, early severe, placentally driven pre-eclampsia is confirmed with angiogenic marker testing.

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Postpartum decline in sflt-1/plgf ratio confirms placental source of angiogenic imbalance and endothelial dysfunction in preeclampsia

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Introduction: Preeclampsia (PE) is a multisystem disorder in pregnancy with a specific collection of signs and symptoms as a result of serious dysfunction of multiple organs. Abnormal placentation in the first trimester, most likely triggers the disbalance of the placental anti-angiogenic factor soluble fms-like tyrosine kinase-1(sFlt-1) and pro-angiogenic placental growth factor (PlGF), which result in systemic endothelial dysfunction (injury) to progressive end-organ damage. According the PROGNOSIS study, the cut-off value of the sFlt-1/PlGF ratio over 85 confirms the suspected PE and proved to be useful in preeclampsia diagnosis. A severely elevated sFlt-1/PlGF ratio is associated closely with the need to deliver within 48hours.

Material and Methods: We determined the serum sFlt-1/PlGF ratio using Elecsys assay /E411-modular system(Roche) before delivery, and 2 days after delivery in pregnant woman with preeclampsia. The study includes 117 patients recruited from hospitalized patients at the University Clinic of Gynecology and Obstetrics in Skopje with suspected preeclampsia, for a period of 6 months. We devided patients in two groups, early-onset PE $<$ 34 gestational weeks (n = 59), and late-onset PE $>$ 34 gestation weeks (n = 57).

Results: The average value of sFlt-1/PlGF ratio in the group of pregnancies with early-onset PE was 568.31 pg/ml (range 227.06 - 1408.6), while in the group of pregnancies with late-onset PE the average value was 243,84 pg/ml (range 89,72 - 813.27). Higher sFlt-1/PlGF ratio in early-onset PE compared with late-onset PE, was accordant to the more antiangiogenic state and progressively worsening clinical course observed in women with early-onset PE.

The values of sFlt-1/PlGFratio obtained 2 days after delivery in both groups were significantly reduced, in pregnancies with early-onset PE averaging 105.77 pg/ml (28.28 - 137.66) and 74.37 pg/ml (38,18 - 126) in the other group, respectively.

Conclusions: All pregnant patients with confirmed diagnosis of preeclampsia had sFlt-1/PlGF ratio over the cut-off value of 85 before the delivery, and significantly lower sFlt-1/PlGF ratio 2 days after the delivery which likely confirms the role of the placental angiogens in the pathogenesis of PE. The sFlt-1/PlGF ratio confirms its possible relevance as a biomarker in the diagnosis and prognosis of the disease determining the angiogenic profile, and the follow-up test after the delivery. This finding can be applied for further planned clinical trials.

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Functional analysis of rita in invasion and migration of trophoblastic cells and preeclampsia

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Aim: Affecting approximately up to 8% of pregnant women preeclampsia is one of the leading causes of fetal and maternal mortality and morbidity. Preeclampsia (PE) is a pregnancy-specific hypertensive disorder. Its pathogenesis is not yet completely understood and no causal therapy is currently available. It is very important to explore new molecular targets and biomarker. RITA, the RBP-J interacting and tubulin-associated protein, has been identified as a negative modulator of the Notch pathway and as a modulator of microtubule dynamics. The aim of this study was to examine the function of RITA in the placenta and in the pathogenesis of PE.

Methods: The expression of RITA was systematically studied in primary placental tissue samples from the first trimester as well as from patients with early- or late-onset preeclampsia and their respective healthy controls. Protein expression was analyzed with immunohistochemistry and Western blot, RNA expression with real-time-PCR. Invasion assay and single cell tracking using time lapse microscopy were performed with RITA-depleted HTR-8/SVneo and SGHPL-4 cells.

Results: We have reported that the mRNA level of RITA is reduced in early-onset preeclampsia and its deficiency is associated with impaired fusion capacity of trophoblast-derived choriocarcinoma cells. In the present study we show that RITA is expressed in primary placental tissue throughout pregnancy and that the mRNA level of RITA is decreased at late gestational stages. The depletion of RITA is associated with reduced expression of *MMP2* (matrix metalloproteinase 2), leading to a lowered motility and invasion ability of various trophoblastic cell lines.

Conclusion: RITA is decreased at late gestational stages and the suppression of RITA reduced the migration and invasion ability of trophoblastic cells. This suggest that RITA is involved in placental development and possibly in the pathogenesis of preeclampsia.

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Hypertension in pregnancy: risk factors – a retrospective study

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Hypertension is a disease that is currently rising in pregnancies and it is considered to be a highly importante risk factor to maternal morbimortality. Therefore it is of high importance to recognise risk factors that can raise its incidence.

The study aimed to verify risk factors for hypertension in pregnancy and compare them with low obstetric risk group. Retrospective study of pregnant women with hypertension and pregnant women with low risk pregnacies surveilled at CHTV between January 2020 and December 2021. Data were collected from clinical records. The statiscal analysis was made using χ^2 test and ANOVA. p-value < 0.01 was considered statistically significant.

71 pregnant with hypertension were surveiled during the study period. 35 of them were diagnosed with Gestacional Hypertension (Group A). 36 had already a chronic hypertension diagnosis (Group B). The control group of low risk prengnacies was composed by 961 pregnant women (Group C). In group A: 40% were nuliparous, the median age was 37 and the median MBI was 31.1 Kg/m^2. In group B: 33.3% were nuliparous, the median age was 36 and the median BMI was 31.9 Kg/m^2. In group C: 51.6% were nuliparous, the median age was 32 and the median BMI was 29.38 Kg/m^2. It was possible to conclude that BMI was a signficant factor in results ($F(2, 1029) = 7.451$, $p < 0.001$, $np2 = 0.014$). The median age of pregnant is a significant factor in results ($F(2, 1029) = 17.830$, $p < 0.001$, $np2 = 0.0336$). Both Group A and B had higher median ages. The association between parity and Hypertension Diagnosis (Group A and B) was statisticaly significant ($X2(1) = 3.922$, $p = 0.048$). Multiparous have a higher chance of having Hypertension.

Higher BMI, maternal advanced age and multiparity are statisticaly significant risk factors for Hypertension.

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Concentrations of heat shock protein 70 (hsp70) in pregnant women with gestational arterial hypertension

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Aim of study: The aim of our study was an evaluation of heat shock protein 70 (Hsp70) concentrations in healthy pregnant women and pregnant women with pregnancy induced hypertension, as well as a comparison of obtained results with values observed in healthy non-pregnant women.

Material and methods: The study included a total of 80 women, which were divided into three groups (pregnant women with pregnancy induced hypertension, healthy pregnant women and healthy non-pregnant women). The concentrations of Hsp70 in serum of all patients were determined by enzyme-linked immunosorbent assay (ELISA) (in pregnant women two times: in III trimester and after delivery).

Results: The mean concentration of Hsp70 in pregnant women with pregnancy induced hypertension was significantly higher than in healthy pregnant women (both in 3rd trimester and after delivery) and in non-pregnant women. In pregnant women with hypertension the mean concentration of Hsp70 after delivery was significantly higher than in the 3rd trimester. Also in pregnant women with hypertension concentrations of Hsp70 at delivery positively correlated with values of Apgar score in 1st and 5th minute of newborn life.

Conclusion: Hsp70 may be a marker of pregnancy induced hypertension and a prognostic factor of newborn state.

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Analysis of the laboratory and clinical development of patients with HELLP syndrome undergoing conservative treatment

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Introduction and aimsof the study: HELLP syndrome occurs in 0,5-0,9% of all pregnancies and has a fetal mortality of 7,4-20,4% depending on the gestational age. However, no consensus has been raised in the treatment of HELLP syndrome. In this study, the laboratory and clinical progression of over two hundred patients with HELLP syndrome undergoing conservative treatment were analysed to evaluate the safety of conservative management and to identify predictors for the clinical development regarding prolongation of pregnancy and fetal as well as maternal outcome. Furthermore, this work compares prenatal and postnatal HELLP syndrome.

Methods: Cohort study including all patients treated with HELLP syndrome between 2010 and 2020 in the university clinic Frankfurt. HELLP syndrome was diagnosed based on thrombocytopenia under 100/nl, increase of transaminases to more than 3fold of the normal laboratory range and disseminated intravascular coagulation measured based on increased d-dimers to 4fold the standard value and also on haptoglobin levels to identify haemolysis.

Results and discussion: The evaluation of the fluctuating laboratory makers identified crucial chronological processes and enabled more exact prediction of the clinical development regarding birth mode, prolongation of pregnancy as well as fetal and maternal outcome. Also, collected data may allow a risk stratification based on gestational age, preexisting diseases and Doppler sonography.

Conclusion: This work shows that conservative management of HELLP syndrome improves maternal and fetal outcome. Furthermore, this study highlights the importance of coagulation monitoring in patients with HELLP syndrome.

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First trimester markers of placental dysfunction in pregnancies with uterine fibroids

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Objective: To investigate whether the measurements of first-trimester markers of placental dysfunction are affected by uterine fibroids (UF).

Methods: This was a prospective study of screening for adverse pregnancy outcomes in women attending for routine pregnancy care at 11 + 0 to 13 + 6 weeks' gestation. We compared measurements of placental

growth factor (PlGF) and uterine artery Doppler PI (UtA-PI) at first-trimester scan in singleton pregnancies with UF to those without UF.

Results: We identified 3125 patients with uterine fibroids at the first-trimester scan and 9375 patients without fibroids, case-matched according to ethnicity. We created 2 study groups, according to the fibroids' measurements. In statistical analyses, we observed significantly lower level of PlGF MoM and UtA-PI in the UF groups. In linear regression, total fibroid volume was shown to significantly affect the levels of PlGF MoM, UtA-PI and UtA-PI MoM.

Conclusion: The findings of our study indicate that pregnancies in patients with uterine fibroids are characterised by lower levels of PlGF MoM and lower measurements of UtA-PI. Additionally, total fibroid volume appears to significantly affect the levels of PlGF MoM, UtA-PI and UtA-PI MoM. More studies are needed to check whether this fact may determine the pregnancy outcome and alter the result of the first-trimester screening for preeclampsia.

Keywords: first trimester, placental growth factor, uterine artery Doppler, fibroids, leiomyomas

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Hybrid operations in placenta accreta spectrum – academic whim or standard procedure?

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Introduction: Placenta accreta spectrum (PAS) is one of the more severe complications associated with incorrect implantation of the placenta treated with cesarean hysterectomy. Operation carries a significant risk of massive hemorrhage. The aim of the study is to evaluate the usefulness of hybrid surgery (using prophylactic balloon occlusion of internal iliac arteries) in PAS in relation to standard surgery.

Methods: We reviewed the records of 19 patients who underwent suspicions of PAS in our Clinic (Department of Gynecology, Obstetrics and Neonatology, Medical University of Gdansk, Poland) between 2019-2022. All of these patients we made a cesarean hysterectomy. In 13 patients we made a standard operation, after them we confirm placental accretism in histopatological result and qualification then in control Group. The study group consist in 6 patients who underwent a caesarean delivery with temporary bilateral internal iliac artery occlusion. The two groups were compared based in gravidity, age, pre- and post- operative haemoglobin, drop in haemoglobin, estimation blood loss, transfusion requirement, durations of surgery, anesthesia and hospital stay.

Results: There was less blood loss under operations in the study group, which meant that the patients required less blood transfusions. In the study group, blood loss ranged from 400 ml to 1200 ml (average 800 ml). Hemoglobin loss on the first day after surgery ranged from 2.0 g/dl to 6.3 g/dl (average 3.71 g/dl). In the control group, blood loss values were greater and ranged from 600 ml to 4000 ml (mean 2000 ml), hemoglobin loss from 2.0 g/dl to 4.1 g/dl (mean 3.1 g/dl) but in the most cases with necessary blood transfusion during surgery. The length of the procedure was longer in the study group due to the length of the radiological procedure. There were no complications during the radiological procedure. Hybrid operations did not decrease time of surgery (surgical time) or hospital stay.

Conclusions: The hybrid operation contributed to the reduction of perinatal blood loss, which reduced the number of blood transfusions and contributes to an overall reduction in maternal complications.

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Labour induction with misoprostol: how do bmi and gestational weight gain influence the outcome?

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Introduction and aimsof the study: The surfacing evidence in favour of elective labour induction (LI) at 39 weeks-gestation is accompanied by concerns about its effectiveness in obese women. Current evidence suggests a positive correlation between obesity and failed LI, and between excessive gestational weight gain (GWG) and cesarean after LI.

This study aims to evaluate the outcomes of LI with misoprostol at 39 weeks of gestation, according to pre-pregnancy Body Mass Index (pBMI) and GWG.

Methods: Women who underwent LI with misoprostol in the 39th week of gestation in Hospital Pedro Hispano in 2021 were selected from S. Clínico® and ObsCare® databases. The data were analysed using IBM® SPSS Statistics Version 22, with significance established at $p < 0,05$.

Results: A sample of 120 women was obtained, with an average age of 29,9 ± 6,2 years and of which 67,5% were nuliparous. In 37,4% of them, pBMI was overweight or obese and in 30,8% GWG was excessive. The global rate of unsuccessful LI was 9,2% and most inductions (90,8%) led to vaginal deliveries.

The likelihood of failed LI and c- section was higher in women who were overweight or obese before pregnancy and who had excessive GWG, but without any statistical significance. However, a statistically significant association ($p = 0,014$) was found between obesity and the need for three or more misoprostol applications; this correlation was not significant regarding GWG.

Concerning labour progression, the achievement of 3, 6 and 10 cm dilation and delivery took longer, although not significantly, in the presence of high pBMI and GWG.

Conclusions: Higher pBMI and excessive GWG seem to correlate with longer LI, more misoprostol administrations and greater probabilities of failure and cesarean-section. The relatively small sample size may justify the absence of statistical significance in most parameters.

This information should be considered when managing LI in these patients.

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Assessment of risk factors for hyperplastic processes of the endometrium in women with reduced reproductive potential

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Introduction: In the structure of gynecological diseases, hyperplastic processes of the endometrium are 15–40%, and in women of reproductive age - 24.0–62.0%. In the structure of female infertility, the uterine factor ranges from 25.20% to 42.30%.

The aim of the study: was to study risk predictors of the development of hyperplastic processes of the endometrium in women of reproductive age to improve preventive approaches to the management tactics of this contingent of patients.

Methods: The results of analytical processing of medical documentation of 860 patients with uterine factor of subfertility and100 somatically healthy female patients were presented.

Results: Dominating influences are such clinical nosologies: endometrial polyposis and hyperplastic processes (44.19%), adenomyosis (22.33%), multiple uterine fibroids (10.47%), uterine synechia (14.19%). The uterine factor was the main factor in terms of reproductive losses and subfertility (38.68%), the incidence of the primary form of infertility was 17.63%, the secondary form (43.68%), the incidence in IVF programs was 119 cases (31.32%), including one in five failed IVF attempts (21.85%).

The following main predictors of the development of endometrial hyperplasia and the risk of reduced reproductive potential were identified: patient's age (over 35 years old) (OR = 2,59; 95% CI: (1,54-4,35); p < 0,05), chronic pelvic inflammatory disease with relapse (OR = 5,17; 95 % CI: (1,68-15,98); p < 0,05), benign tumors and ovarian retention formations (OR = 13,78; 95 %: 4,71-40,28; p < 0,05), comorbidity of gynecological pathology (OR = 7,82; 95 % CI: 1,78-43,42; p < 0,05), obesity I-II degree (OR = 8,31; 95 %; CI: 2,99-23,01; p < 0,05) and endocrinopathy (thyropathy) (OR = 5,29; 95 %; CI: 1,26-20,53; p < 0,05), reproductive losses in anamnesis (OR = 4,27; 95 %; CI: 1,53-11,89; p < 0,05), high parity of intrauterine interventions (OR = 4,75; 95 % CI: 1,04-23,98; p < 0,05).

Conclusions: The obtained results allow us to confirm the pathogenetic concept of the development of hyperplastic processes of the endometrium and systematize the main parameters of reproductive health disorders in such patients. This makes it possible to optimize preventive approaches in the forecast of possible reproductive failures and therapeutic and preventive measures in this category of patients.

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Women's awareness of the risk of exposure to excess body weight during pregnancy

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Introduction: Half of women start pregnancy with overweight, which increases the risk of pregnancy and birth complications. Recommendations to improve preconception care emphasize the need to ensure that women of reproductive age understand factors that increase the obstetric and perinatal risks connected with high body mass index (BMI).

The aim of the study was to investigate the overweight women's awareness of the risks of perinatal and obstetric complications.

Study whether women who start pregnancy with overweight were known of the increased risks of the gestational complications associated with a high (BMI) and the barriers and limitations that women had to optimize their body weight before conception.

Methods: 117 pregnant women were enrolled in the research. The first group - 68 overweight women, the second - 49 women with normal body weight before pregnancy. Two questionnaires were used: "Questionnaire on the assessment of the level of knowledge of women about the risks associated with overweight during pregnancy" and "Barriers and limitations that women had to optimize body weight before conception". Patients filled out the presented questionnaires individually during the first antenatal visit.

Results: The majority of women knew that overweight increased the general risk of pregnancy complications regardless. The main barriers and limitations for women to optimize their weight before pregnancy were insufficient basic knowledge about the risk of gestational, especially perinatal complications during pregnancy and childbirth, associated with overweight, unsuccessful repeated irregular attempts to weight lose, lack of information and consulting medical professionals on this issue.

Conclusions: Being overweight, usually caused by incorrect lifestyle, including dietary choices and lack of physical activity. It remains relevant to develop programs aimed at improving women's knowledge about overweight as a factor of high obstetric and perinatal risks.

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Optimization of the diagnostic algorithm of chronic endometritis in women with hyperplastic processes of the endometrium and subfertility

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Introduction: When considering the causes of infertility caused by the uterine factor, one should point to a combination of factors, in particular, chronic endometritis (CE) with other forms (leiomyoma, synechiae, hyperplastic processes of endometrium (HPE)

The aim of study: to evaluate the diagnostic value of sonographic, morphological and immunohistochemical markers of CE in women with HPE and subfertility.

Methods: 120 patients with HPE and subfertility were examined: group 1 included 40 women with endometrial hyperplasia without atypia, group 2 – 40 women with polyposis, group 3 – combination of endometrial hyperplasia and polyposis. All women underwent pelvic ultrasound with sonoelastography, hysteroscopy with targeted biopsy of the endometrium, pathohistological and immunohistochemical examination, which included determination of the expression of plasma cells - CD138+ and CD56+.

Results: Pelvic ultrasound allowed us to suspect the presence of CE. To clarify the specified diagnosis, sonoelastography was performed, which made it possible to reduce the number of false-positive results and correctly interpret the nature of pathological changes in the endomyometrium in 113 cases (94.2%), as well as to increase the sensitivity of ultrasound methods. A chronic inflammatory process with a CD138+ index above 10 was detected in 17.5% in group I, 42.5% in group II, and 50.0% of cases in group III.

A low content of CD56+ immunocompetent cells was established in all main groups, where statistically significant differences were obtained in patients of the II and III groups (1.8 times greater data compared to the indicators in the I group, p < 0.05), which demonstrates the prerequisites for impaired endometrial repair, its decidual transformation and implantation ability in patients with HPE.

Conclusion: Optimization of the diagnostic algorithm of CE in women with HPE, indicates a variety of structural and immunological changes in the endometrium and requires its therapeutic correction at the pregravida stage.

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Research on sexual functioning of women based on the fsfi questionnaire and bmi

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Sexual health is one of the most important aspects of human well-being. The aim of the study was to analyze the influence of selected female characteristics on their life and sexual functioning. One of the aspects considered was body mass index (BMI).

Materials and methods: The study was conducted in a group of 85 women, aged 20-63 years, who completed the Female Sexual Function Index (FSFI) questionnaire. The FSFI consisted of 21 questions, of which 19 referred to sexual activity within the last 4 weeks, and 2 to sex drive satisfaction. The relations between the estimated parameters were analyzed with statistical methods. The Mann–Withney test, chi-quadrat Pearson test, and Spearman correlation test were used. The statistical calculations were performed using Statistica 10 PL package.

Results: Significant correlations between desire and age and the first menstrual period were found. The desire was decreasing with age, and it was lower in women in whom the first menstruation occurred later in life. Other significant correlations were shown between sexual initiation and desire, arousal, and orgasm. The later the women started their sexual activity, the lower were their scores for the domains of desire, arousal, and orgasm. No relationship was found between the use of contraceptives and sexual activity.

Conclusions: The study demonstrated the effects of selected features, that is current age, age at menarche, and age of sexual initiation on the life and sexual functioning of the examined women. It showed no correlations between the use of contraceptives and sexual life parameters, and no significant differences in sexual performance were noted with reference to BMI.

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Prevalence of anxiety and depressive disorders in patients with pcos

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Introduction and aims of the study: The aim of this study was to review the scientific literature on prevalence of anxiety and depression associated with PCOS in different countries.

Methods: The systematic literature analysis was performed using databases : "Google scholar", "Pubmed", „Elsevier", „Sciencedirect", "Social Science Research Index". Articles were selected by including at least 3 of the Rotterdam criteria of polycystic ovary syndrome (PCOS) as well as depression and anxiety symptoms. After reviewing the scientific literature and excluding inappropriate articles, 25 articles were analyzed, from which only 17 were selected being relevant to the topic as they matched the search criteria. Prevalence of anxiety and depressive disorders in patients with PCOS was reviewed. The main questionnaires that were used in articles were Hospital Anxiety and Depression Scale [HADS] and The Short Form (SF-36) Health Survey to measure the quality of life of the patients with PCOS.

Results: According to the scientific literature, PCOS affects 10 – 20 % of women. The results of reviewed articles show that depression and anxiety are closely related to PCOS: women with PCOS are tended to experience more symptoms of depression and anxiety. It was found, that 30 - 50 % of women with PCOS had increased anxiety and depressive symptoms comparing to the control group without PCOS. Additionally, the studies show that anxiety symptoms are more common than depressive symptoms in women with PCOS. The PCOS symptoms like infertility, menstrual irregularity, acne, hirsutism tend to worse the quality of life for women.

Conclusions: Depression and anxiety scores were significantly higher in patients with PCOS and correlated with PCOS symptoms. Women with PCOS tend to experience more anxiety than depression. The main symptoms of PCOS strongly affect the quality of life of women with PCOS.

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Challenges encountered during the implementation of the project Self-monitoring of Blood Pressure and Urinalysis by Pregnant Mothers in Cumberland infirmary. NCIC

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Background: Hypertensive disorders of pregnancy affect approximately 10% of pregnant individuals globally, and are among the leading causes of pregnancy-related mortality and morbidities. Pre-eclampsia is a condition that typically occurs after 20 weeks of pregnancy. It is a combination of raised blood pressure (hypertension), protein in your urine (proteinuria). Regular blood pressure checks are crucial to the early detection of pre-eclampsia and are associated with better maternal and neonatal outcomes. This quality improvement project will empower pregnant mothers in self-management of their own health and promote shared decision making.

Advantages: Considering Cumbria's geographical situation, it is very useful to monitor patients located in remote rural locations. It will help in empowering self-management skills among pregnant mothers and also helping with shared decision making. Obstetricians were presented with a series of management options with increasing involvement of women and reduced visits to clinic. Once trained, the training obtained will be a lifelong skill. Availability of a blood pressure machine at home will enable detection and monitoring of hypertensive disorders in other household members as well.

Challenges faced during initial phase: 1. Capital investment on accredited blood pressure machines provided by the Trust. 2. Provision of quality controlled assessed urine dipsticks to measure proteinuria. 3. Involvement of trust point of care quality control team. 4. Preparation of a Standard Operating Procedure with stakeholder engagement and going through the approval process. 5. Preparation of patient informa-

tion leaflets which could be understandable to average pregnant mother. 6. Training pregnant mothers on measuring blood pressure and proteinuria and to make sure that the instructions are followed. 7. Convincing the medical staff on the fear that patient management going out of their hands. 8. Reassure the staff on concerns about losing their job in measuring blood pressure. 9. Establishment of a reliable way of communicating findings into the digital electronic patient record.

Overcoming the challenges: Established this as a quality improvement project with the help of a Listening into action (Lia) group of the trust. Adopted the Lia seven steps approach as follows

1. Our Mission. 2. Case for change. 3. Collective ownership 4. Engage all the right people 5. The power of many 6. Actions that make the difference 7. Our before and after story.

Having used the seven step approach we as a team were able to implement this project and overcome all the challenges faced. Finally, we are going to evaluate the outcome of this project. This project has demonstrated that using the seven step approach can empower women in shared decision making about their own health & outcome .This can be used as a method for achieving united nation's sustainable development goals.

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Epidemiology and clinical picture of obstetric and gynecological conditions in women with acromegaly – a preliminary report

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Introduction: Acromegaly is a rare disease caused by the excessive secretion of growth hormone most commonly by a pituitary neuroendocrine tumor. It is typically associated with changes in the external appearance of patients, but it can also lead to organ complications, occurring in the form of cardiovascular and metabolic disorders or carcinogenesis. The relationship between acromegaly and the gynecological diseases has not been investigated so far.

The aim: The aim is to determine the incidence and type of gynecological diseases in patients with acromegaly, with particular emphasis on the occurrence of uterine fibroids, as well as to assess the quality of life.

Methods: So far, 32 patients with acromegaly have been recruited. Each patient underwent a standard gynecological and an ultrasound examination of the reproductive tract. In addition, a detailed gynecological and obstetric history was conducted in along with the quality of life analysis using the Acromegaly Quality of Life Questionnaire (ACROQOL).

Results/Discussion: Patients aged 25 to 77 years were examined. By the time of the study, 81% of the patients had undergone surgery for acromegaly. A total of 47% of the patients were premenopausal and 53% were peri- or postmenopausal. The median number of pregnancies in the respondents was 0.5. Among women who were pregnant at least once, 32% experienced miscarriage. A history of uterine fibroids and genital prolapse was reported by 31% and 25%, respectively. As regards the ACROQOL, as many as 48% of patients chose "rather agree/strongly agree" in case of the statement: "I have a problem with sexual relationships". Moreover, 44% of the respondents selected those answers to the statement "I have little desire for sex".

Conclusions: Our data suggest the need for additional analyses of acromegaly as a risk factor of uterine fibroids. Moreover, attention should be paid to sexual dysfunction in patients with acromegaly.

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Gynaecology, physiotherapy and balneoclimatology - an interdisciplinary approach

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Introduction: Genital inflammations are the most common gynaecological disorders in girls and women. Patients usually visit a gynaecologist because of the symptoms of such inflammations as: vaginal discharge, swelling, changes in the vulvar skin, vulvar pruritus, pain in the genitalia, and lower abdominal pain. The treatment of inflammations in the external and internal genitalia is multidimensional and complex. Interdisciplinary treatment performed by gynaecologists, obstetricians and physiotherapists can improve female health, which is crucial in terms of their quality of life.

Aim study: The objective of this paper is to present alternative and supportive methods/ways of treatment of female genital inflammations by means of physiotherapy and balneoclimatology.

Materials and Methods: Reviewers searched medical and public databases PubMed, Google Scholar, MEDLINE. The authors consider aspects of the use of physiotherapy and balneoclimatology for inflammation in gynaecology.

Results: The basic methods used in physical therapy are light therapy, electrotherapy and therapy with natural resources, e.g. peloid therapy and, balneotherapy. In physical therapy, short-wave diathermy is most frequently used, as the application of electromagnetic energy to the body at a frequency of 27.12 MHz, generating and absorbing heat in tissues. Electrostimulation can be performed with vaginal probes, rectal probes or electrodes attached to the outer surface of the skin. Peloid therapy using peat plays a special role, this therapy consists of using wrappings, hip baths, as well as peat tampons or underwear. Rectal injections of peat are also common. Balneology is used in gynaecology in recurrent vaginal or cervical inflammation. The main treatments are brine and radon baths, as well as brine vaginal irrigations.

Conclusion: Physiotherapy and balneoclimatology are essential in treating inflammations in gynaecology as supplementary/supportive treatments. Interdisciplinary treatment performed by gynaecologists, obstetricians and physiotherapists can improve female health, which is crucial in terms of their quality of life.

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Stress hormones to bishop score ratio and induction to delivery time interval

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Introduction and aims of the study: Some clinical studies have shown that the combination of mechanical and pharmacologic methods may have benefits in labour induction(LI) process over the use of a single method without increasing the risk of obstetric or perinatal outcomes. The Cortisol/Dehydroepiandrosterone Sulfate(DHEA-S) ratio is considered a measure of chronic stress, which affects the hypothalamic-pituitary-adrenal(HPA) axis. The aim of the study was to find out if the hormonal ratio has an impact on the induction to delivery time interval.

Materials and Methods: The implementation of the project "Role of Metabolome, Biomarkers and Ultrasound Parameters in Successful LI" was started in Riga Maternity hospital January 2021. Nulliparous women with singleton pregnancy, at cephalic presentation, intact membranes and Bishop score 6 or less with indication for LI at term were included. Laboratory samples were collected right before LI. Cortisol/DHEA-S ratio, as well as Cortisol/DHEA-S ratio to Bishop score index were calculated. LI was performed with a combined method–Foley catheter and Misoprostol orally. Descriptive statistical analysis was carried out using IBM SPSS 24.0software.

Results: 50patients were included into the study. The mean age of participants was 28.1years. Morning cortisol level from saliva and DHEA-S from blood were collected before the LI. Mean Cortisol/DHEA-S ratio was 13.34(SD 5.37). Mean Bishop score was 3points. The mean induction to delivery time interval was 16hours 12minutes. Significant, but weak correlation in Cortisol/DHEA-S and Bishop score index was observed from the start of the LI to the time of the delivery ($r = 0.352$;$p = 0.013$). These factors did not affect the mode of delivery ($p > 0.05$). 45patients(90%) had vaginal delivery after successful LI.

Conclusions: The higher is the Cortisol/DHEA-S/Bishop score index, the longer is the induction to delivery time interval.

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Are obese mothers at higher risk of develping postpartum depression?

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Introduction and aims of the study: Obesity, defined as having a body mass index (BMI) > 29.9 kg/m2, has been associated with anxiety, major depression disorder, and other mental disorders in the non-pregnant cohort. Evidence regarding obesity and its association with developing postpartum depression (PPD) is scarce and conflicting. Our aim is to determine if obesity is associated with a higher rate of screening positive for postpartum depressive symptoms as measured by the Edinburgh Postnatal Depression Scale (EPDS).

Methods: This study is a retrospective cohort study. After ethical approval, a retrospective review of all women who had a live singleton delivery in 2016-2017 in the Rotunda Hospital in Dublin, Ireland, was performed. The primary exposure variable, booking BMI, was gathered, and women were stratified into four of the World Health Organization BMI categories (underweight, normal weight, overweight, and obese). Other variables gathered were maternal age, parity, and mode of delivery. All women were screened for postpartum depression using the EPDS and the primary outcome measure for our study was an EPDS score of ≥ 12.

Results: Among 15,309 women studied, 4.47% of normal weight women screened positive for PPD. A statistically significant proportion of overweight and obese women screened positive: 5.85% and 5.95%, respectively. Multiparity, age over 40, and delivering via emergency Caesarean section were also associated with higher rates of screening positive for PPD among obese women.

Conclusions: Obesity may be a major and under-recognized risk factor for developing PPD. While we did not take into account psychological risk factors, this is an important stepping stone for providing preconceptual and antenatal counselling and care to obese women with regards to their mental health post pregnancy.

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The psychosomatic status of pregnant and puerperal women in a crisis situation of military actions in ukraine: results of 10 months of the health and social project of the odesa branch of the association of ob/gynecologists of ukraine

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2. Perinatal mental health

Objective: The socio-political state of any society determines the culture and quality of maternity care, determines the development and psychophysical health of the nation for generations to come. With the start of Russia's full-scale invasion of Ukraine on February 24, 2022, Ukraine's basic safety and security needs, especially for pregnant/puerperal women, have been disrupted.

Aim: Study of the psychosomatic state of pregnant /puerperal women who found themselves in f military operations, with the aim of stabilizing and improving the demographic situation in Ukraine.

Study design: A prospective study of the psychosomatic state of pregnant / puerperal women during the War in Ukraine by conducting an online questionnaire using The Beck Depression Inventory (BDI).

Results: 731 pregnant / puerperal women took part in the projects for the period from April 7, 2022 to January 28, 2023. Of them - those are living in the zone of active hostilities (I group) - 138 (18.9%), living outside the zone of active hostilities in Ukraine (II group) - 504 (68.9%), and migrants living outside Ukraine (III group) - 89 (12.2%). There were 465 (63.6%) pregnant and 266 (36.4%) puerperal women. When comparing the psychosomatic status, it was established that in women from

the II (13.5 ± 0.36) and III (12.9 ± 0.38) groups, the indicator of the Beck scale corresponds to the variation of the norm. In women from group I, the average score on the Beck scale (17.1 ± 0.31) indicated mild depression, while the indicator ranged from 5 (mild) to 48 (severe). Post Hoc Tukey HSD (beta) analysis showed the presence of significant differences between groups (Tabl.1).

Pairwise Comparisons
$HSD_{.05}$ = 0.2685 $HSD_{.01}$ = 0.3386
$Q_{.05}$ = 3.4032 $Q_{.01}$ = 4.2910
I : II
M_1 = 0.86 M_2 = 0.68
0.17
Q = 2.19 (p = .27754)
I : III
M_1 = 0.86 M_3 = 0.64
0.21
Q = 2.68 (p = .14931)
II : III
M_2 = 0.68 M_3 = 0.64
0.04
Q = 0.49 (p = .93497)

Conclusions: Staying directly in the zone of active hostilities causes mild to severe depression in pregnant/ puerperal women with average indicators corresponding to mild depression. In general, the crisis situation of military actions in Ukraine at the time of this stage of the survey indicates, apparently, the high priority of the gestational dominant; further studies are necessary.

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Antenatal Depression Screening During The COVID-19 Pandemic In A German Perinatal Center

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Background: Depression is the most common perinatal psychiatric condition (in literature 10 -15%). When untreated it is related with an increased risk of postpartum depression and severe psychosocial developmental disorders in the offspring. In addition, women with depression have a higher risk of a traumatic birth experience.

Aims: The aim of our study was to confirm the high prevalence of depression in our population and to investigate possible changes during the COVID-19 pandemic.

Methods: All patients presenting for delivery (about 8000) at our department between 01.04.2020 and 31.12.2022 were asked to complete the EPDS Plus questionnaire with two additional questions on experience of violence and trauma. A total of 5308 patients completed the questionnaire. Patients with a score 10-12 were referred to participating counseling services and with a score of 13+ to perinatal mental health services.

Results: 1. The prevalence of antepartum depression in our collective was 12%. This is within the prevalence range reported in the literature. 2. History of experience of violence and trauma is significantly more frequent in the collective with depression. The higher the EPDS score, the more frequent this is. 3. The reported experience of violence increased over the course of the COVID-19 pandemic.

Discussion: With a reasonably low effort (approx. 5-15 minutes for a patient with high EPDS+ score), we could identify and treat high-risk patients for peripartum depression. The study also provides evidence, that the COVID 19 pandemic, while not increasing the incidence of peripartum depression, may increase the rate of experience of violence.

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Accuracy of estimated fetal weight assessment in fetuses with congenital diaphragmatic hernia – Is the Hadlock formula a reliable tool?

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Introduction and aims of the study: Congenital diaphragmatic hernia (CDH) is defined as organ protrusion from the abdominal to the thoracic cavity. The Hadlock formula is the most commonly used tool for calculating estimated fetal weight (EFW).The anatomical nature of CDH usually leads to underestimation of the abdominal circumference, resulting in underestimation of fetal weight. We investigated whether the EFW error margin differs between infants with isolated CDH and matched controls. Apart from Hadlock, we used a new formula, designed especially for fetuses with CDH, to determine the superiority of either method

Methods: In our study, we investigated differences between EFW and actual birthweight in 42 fetuses with CDH as compared to 80 healthy matched controls. EFW was calculated using the Hadlock formula and a recently introduced formula described by Faschingbauer et al., which was tailored for fetuses with CDH.

Results: At baseline, the two groups differed only by time elapsed between ultrasound scan and delivery (mean difference in days: 0.84 vs. 5.6, $p < 0.001$). The birthweight of CDH neonates was significantly lower as compared to healthy controls. Mean abdominal circumference was lower in CDH newborns as compared to controls (341.1 mm vs. 320.3 mm). The results obtained with the unadjusted Hadlock formula were associated with significantly higher error in the study group than in controls (9.7% vs. 6.5%, respectively, $p = 0.005$). Other methods generated comparable results. In the study group, the percentage difference in EFW decreased significantly after adjusting for time elapsed between measurements and delivery.

Conclusion: The use of tailored approach for EFW assessment in CDH fetuses proposed by some authors shows no definite advantage over well acknowledged Hadlock formula. Routine biometry scan remains useful for predicting birthweight.

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Comparison of the results of nipt with the pregnancy outcome

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In a pregnant woman, the amount of free DNA in the circulation consists of the free DNA of the mother and free DNA of the fetus. The test

used for quantitative and qualitative assessment of free fetal DNA in the pregnant woman's circulation is NIPT.

The aim of this study was to compare the results of NIPT with the outcome of pregnancies or invasive tests.

The study included 164 pregnant women, regardless of the outcome of the combined test, which underwent NIPT and then answered survey questions about the course of pregnancy after pregnancy.

Among the 164 patients included in the study, 8 fetuses had an increased risk of trisomy (13,18, or 21) in the NIPT. The suspected in NIPT aneuplidies were subsequently confirmed in the invasive test.

In the next 3 patients with normal NIPT and normal invasive test results were found but multiple fetal abnormalities were observed. In the next 1 case, gender discordance was found - in fetal ultrasound scan and phenotypically in the newborn. The observed sex was female, while in the NIPT the sex was male and final genetic diagnosis Swyer's syndrome was found. In the remaining group of 152 patients, the NIPT results correlated with the birth of genetically normal newborns without any chromosomal aberrations.

Currently, according to the guidelines of PTGIP after receiving an intermediate result of the combined test the patient should be offered NIPT. When NIPT test indicates an increased risk of chromosomal aberrations in the fetus it is necessary to carry out an invasive diagnostic test.

Analyzing the preliminary results presented above, we may draw a conclusion that the results of NIPT and invasive testing are comparable.

Nevertheless, there is a need to expand the number of patients studied comparing NIPT and pregnancy outcomes to achieve a credible statistical result.

The goal is to evaluate NIPT as a single diagnostic test method in intermediate-risk patients in an integrated study.

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Prenatal myelomeningocele repair improves social urine continence, reduces the risk of urinary tract infections and constipations

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Introduction: Prenatal myelomeningocele (MMC) closure significantly reduces the need for hydrocephalus shunting and improves lower extremity motor function.

The aim of study was to evaluate the influence of the timing of MMC repair (before or after birth) on neurogenic bladder and bowel function.

Material and Methods: Clinical data were prospectively collected for all patients who underwent fetal or postnatal MMC repair. Assessments include renal and bladder Ultrasound, Voiding Cystorethrogram, Urodynamic Study, need for CIC, occurrence of urinary tract infections (UTI), degree of social urinary continence and constipations. From the group of 135 patients after prenatally MMC closure from 2006 to 2019, 51 patients with a postnatal follow-up of at least 3 years were included in this study and compared with 51 patients after postnatal MMC repair in the same age. The level of the spina bifida was similar in both groups. All children, regardless the kinde of operation (pre or postnatal), were managed according to the same protocol.

Results: Urodynamic and imaging studies showed no differences between the test groups.

The incidence of neurogenic bladder dysfunction was similar. Children from the prenatally group showed statistically significant lower number of UTI's in all age groups and had a statistically significant better urine continence in age above 3 year and less frequent constipation when compared to postnatally operated patients ($p = 0.005$).

Conclusions: Prenatal MMC repair improved the clinical condition of the urinary tract, therefore improving significantly the social urinary continence and reducing the risk of constipation.

The children after prenatally MMC operation in the future can achieve better quality of life, self-esteem and independence.

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Soluble urokinase-type plasminogen activator receptor as biomarker of intra-amniotic inflammation in vaginally collected amniotic fluid

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Introduction and aims of the study: In patients with preterm premature rupture of the membranes (PPROM), the diagnosis of intra-amniotic inflammation and pregnancy management strategy remains challenging. Much research has been done analyzing amniotic fluid biomarkers to determine histological chorioamnionitis and fetal inflammatory response syndrome (FIRS), which are hallmarks of intra-amniotic inflammation. Although soluble Urokinase-type Plasminogen Activator Receptor (suPAR) is known as a nonspecific inflammatory biomarker, its significance in diagnosing intraamniotic inflammation has not been studied. We aimed to determine whether suPAR in the vaginally obtained amniotic fluid could be a predictor of intra-amniotic inflammation after PPROM.

Methods: We included 145 pregnant women with PPROM at 22-34 weeks of gestation in a prospective cohort study. In amniotic fluid collected vaginally less than 48 hours before delivery, suPAR was analyzed by an enzyme-linked immunosorbent assay. The outcome was the presence or absence of histologic chorioamnionitis based on histological examination of the placenta and/or FIRS according to cord blood interleukin-6 levels >11 ng/ml or histological funisitis. The data were analyzed using the R package (R-4.0.5).

Results: The median suPAR level was highest in patients with concomitant histological chorioamnionitis and FIRS (38.98 ng/mL, interquartile range, 28.25–89.85, $P < 0.001$). The area under the curve for histological chorioamnionitis with FIRS was 0.72 (95% confidence interval (CI), 0.63-0.81) with a cut-off of 27.73 ng/mL, and sensitivity, specificity, positive and negative prognostic values of 78%, 72%, 48%, 91%, respectively. The cut-off of suPAR >27.73 ng/mL increased the odds of having histological chorioamnionitis complicated with FIRS 8 times (95% CI, 3.13-22.13).

Conclusion: Amniotic fluid suPAR may be a valuable predictor of advanced intra-amniotic inflammation. Noninvasive amniotic fluid analysis may assist in the management decision of patients with PPROM before 34 weeks of gestation.

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Analysis of the course of pprom pregnancy

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Introduction: Premature rupture of membranes occurs in roughly 4% of all pregnancies. PPROM is a risk factor for development of oligohydramnios, chorioamnionitis, foetal infections, foetal and maternal mortality. Based on subdivision PPROM patients according to gestational week as well as etiopathogenesis, symptoms and results of therapy - we evaluated treatment, health consequences, maternal and foetal complications in pregnancies affected by premature rupture of membranes. The aim of our analysis of patients treated in II KGiP w USK in Wrocław is evaluation of used therapy protocols and frequency of complications developing in affected pregnancies.

Methods: We selected 110 patients diagnosed with PPROM in years 2021-2023 (January 2023) in II KGiP w USK in Wrocław. We analysed each patients treatment of PPROM, as well as maternal, foetal and neonatal health in relation to gestational age during which PPROM was diagnosed.

Results: PPROM is not a direct indication for immediate labour induction or caesarean section, although it is necessary to monitor inflammatory markers until foetal biological maturity is achieved. Therapy which allows identification of bacterial infection, including sepsis, is based on daily CRP examination accompanied with PCT examination performed with no less than two days apart. Fetal and neonatal survival rate and positive health outcomes are greater in group of late prematurity (37-34 gestational week) about 100% and worsen in groups of earlier prematurity including 33-30 gestational week – about 90%, 29-25 gestational week – about 80% and exceptionally prematurity (24-17 gestational week) about 15%. Preservation of pregnancy affected by PPROM is possible in every of previously mentioned subtypes.

Conclusion: PPROM is not an indication for immediate induction of labour or caesarean section, the analysis of inflammatory markers allows preservation of pregnancy until foetus is able to survive by itself. Therapy which allows identification of bacterial infection, including sepsis, is based on daily CRP examination accompanied with PCT examination performed with no less than two days apart.

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The mode of delivery in high-risk pregnancies without iugr with normal and abnormal tibial artery parameters. A longitudinal study

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Introduction and aims of the study: The purpose of this study was to measure the pulsatility index (PI) of the fetal tibial (TA) artery of high-risk pregnancy fetuses without IUGR and to compare the mode of delivery in the groups of subjects with normal and abnormal fetal tibial artery parameters.

Methods: This prospective observational study was conducted at the Center of Obstetrics and Gynecology of Vilnius University Hospital Santaros Clinics, Vilnius, Lithuania. The patients were recruited during consultations or treatment from 2019 to 2022. The study population included 56 pregnant women with singleton pregnancy at the gestational age from 33 + 0 to 40 + 0 weeks diagnosed with high-risk pregnancy without IUGR. The ultrasound scan dopplerometry of TA PI was performed weekly and the mode of delivery was registered. The statistical analysis included the last measurement of the tibial artery PI taken before the delivery the parameters of which were compared with the mode of delivery.

Results: In the high-risk pregnancies group without IUGR, the differences in the mode of delivery were statistically not significant. However, the trend was observed in the abnormal tibial artery group. The participants of this group underwent a lower percentage of cesarean sections (30.3%), compared with those from the normal tibial artery group (26.1%). Meanwhile, the percentage of spontaneous labor cases was similar in both groups.

Conclusions: High-risk without IUGR fetuses with abnormal peripheral tibial artery PI had a lower percentage of cesarean sections and a higher percentage of labor induction than fetuses with normal tibial artery PI. The tibial artery doppler examination may have additional prognostic value in predicting the mode of delivery in high-risk pregnancies without IUGR.

Keywords: Doppler, tibial artery, mode of delivery, high risk pregnancy

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How to predict the follow up based on prenatal diagnosis of severe birth defects?

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Summary Aim of the study: Can we predict fetal or neonatal death based on ultrasound and echocardiographic diagnoses? Is it possible to distinguish between “critical” fetal defects from “most severe” defects?

Material: 64 fetuses with complex birth defects diagnosed 2006-2016 in tertiary center.

A new tool - Malformation Index MI was introduced by authors.

Results: In survivors (> 7 days to 28 days), MI was 2.6 - 3.11 points. In the group of deaths up to 7 days, the average MI was 4.0 points, in the fetuses who died on the zero postnatal day MI was 4.9 points, and fetuses who died in utero MI 5.5 points. The Pearson linear correlation index was 0.65 and the Spearman rang index was 0,67.

Conclusions: Congenital heart disease, elective (IM 2) or critical (IM 3) with non-cardiac defect requiring elective or urgent intervention (IM 2 or 3 points) correlated with the risk of fetal or neonatal death.

Isolated heart disease or non-urgent (mild) non-cardiac defect (IM < 4) correlated with the probability of survival of the neonatal period

Based on prenatal detailed ultrasonography and echocardiography, we can distinguish between fetal “critical” malformations, which need an urgent and rescue procedures, and “the most severe ” fetal malforma-

tions, when medical intervention is unjustifiable from medical and ethical point of views.

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The clinical significance of low levels of papp-a during first trimester pregnancies in fetuses with normal chromosome number

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Introduction and Aim: The aim of the study was to determine the relationship between low concentration of PAPP-A (≤ 0.4 MoM) during first trimester screening and the occurrence of diseases complicating pregnancy associated with placental insufficiency as well as newborn perinatal test results.

Methods: The study retrospectively evaluated the results of 36,718 patients. Into the analysis were included patients with a singleton pregnancy who received first trimester screening results indicating high risk of trisomy 21, 18 or 13. The patients were divided into two groups (G1/G2) according to the level of PAPP-A (G1 PAPP-A ≤ 0.4 MoM, G2 PAPP-A > 0.4 MoM). In all subjects amniocentesis was performed and fetal karyotype was determined. Patients with chromosomopathies were excluded from the study. Next it was determined which diseases occurred during pregnancy in the patients, with special consideration of conditions associated with placental insufficiency such as preeclampsia, fetal growth restriction, pregnancy-induced hypertension(PIH), placental abruption or HELLP syndrome, and newborn perinatal test results were analyzed.

Results: 334 women were included in the final analysis, of whom 26.34% qualified for G1 and 73.66% met the inclusion criteria for G2. In the group with low PAPP-A, significantly more common were gestational diabetes (5.68% vs. 1.63%), PIH (13.64% vs. 2.03%), and stillbirths (5.68% vs. 0.004%). After summing up all the analyzed conditions that could be associated with placental insufficiency, we found a significantly higher incidence in G1 compared to G2 (44.31% vs. 23.17%). The percentage of premature births in the G1 was 12.5%, and in the G2 it was 0.065%.

Conclusions: Low levels of PAPP-A during first trimester examinations can be used as an independent predictor of conditions associated with placental insufficiency occurring in the second half of pregnancy.

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Efficacy of methotrexate treatment in extrauterine pregnancies and beta-human chorionic gonadotropin levels

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Introduction: Extrauterine pregnancy incidence have increased steadily during the years. The last decades also marked a swift in the approach of managing extrauterine pregnancies, with surgery no longer being the modality of choice. Medical management with methotrexate is now one of the most popular protocols, with success rates reported up to 95%.

Aim: To determine the success rate of methotrexate treatment and evaluate how beta-human chorionic gonadotropin levels affect the efficacy of this approach.

Methods: This is a retrospective cohort of 53 cases admitted at 'Koço Gliozheni' University Hospital of Obstetrics and Gynecology. 100 mg intramuscular methotrexate was administered to eligible patients.The need of an emergency surgical intervention marked the failure of medical treatment. Baseline characteristics of patients such as age, mean mass measurements and βhCG levels were studied. Ethical approval from the head of the gynecology department was obtained. Statistical analysis was performed by means of chi-square and Odd ratio tests, Mann-Whitney U test for continuous variables and ROC analysis. Significance was set as $p < 0.05$.

Results: Methotrexate treatment was successful in 58% of the cases. hCG was significantly higher in the failure group (6071 vs 2913, $p < 0.0001$). The hCG cut-off value was calculated to be 2400 mIU/ml, with values higher than 2400 mIU/ml presenting a 15-fold higher odds for treatment failure. This result was statistically significant.

Conclusion: While methotrexate is a good alternative to surgical treatment, the favorable outcome of this approach is dependent and limited by the initial βhCG levels.

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Outcomes of monochorionic twins with twin reversed arterial perfusion sequence: interstitial laser versus cord occlusion

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Twin reversed arterial perfusion sequence (TRAP) is a rare complication of monochorionic twins (MC) which occurs in 1 per 35000 deliveries. Our study aimed to describe outcomes of MC twin pregnancies complicated by TRAP sequence treated with interstitial laser versus cord occlusion.

Study population included 46 MC pregnancies with TRAP sequence treated in two fetal surgery centers in Poland. Study population was divided into: interstitial laser implemented at 12-22 weeks' gestation (n = 22) and cord occlusion at 17-27 weeks' gestation (n = 24).

Median gestational age at intervention was 16 weeks in the group treated with laser and 21 weeks in the group treated with cord occlusion. Pregnancy loss within 2 weeks after the procedure occurred in 27% of cases in the group treated with laser and in 8% of cases from cord occlusion group (p = 0.128). Survival rate of the pump-twin was 73% in the laser group and 87.5% in the cord occlusion group (p = 0.276). Median gestational age at birth was 38 weeks (range 32-41) in the group treated with laser and 35 weeks (range 28-40) in the cord occlusion group. Delivery before 34 weeks occurred in 2/16 cases after laser treatment and in 7/22 cases after cord occlusion (p = 0.254). The need for repeated procedure occurred in three cases after laser and in two cases after cord occlusion (p = 0.632). Three cases of speech development, bilateral hearing impairment, or cerebral palsy were reported after cord occlusion compared to zero cases after laser treatment (12-36 months of age) (p = 0.249).

Interstitial laser is associated with higher risk of pregnancy loss within 2 weeks after the procedure, however if the pregnancy progresses, it is associated with lower risk of preterm birth and neurological disabilities in the survivors compared to cord occlusion.

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More than a hundred thousand respondents within 48 hours – how the power of social media helped to understand pregnancy loss in Poland – a retrospective population-based cohort study

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Introduction: Miscarriage is defined as the loss of pregnancy before 20-24 weeks of gestation, and it is the most common complication of early pregnancy. The aim of the study was to determine the prevalence and risk factors of spontaneous abortion in the population of Polish females to provide a reference for clinical work.

Methods: A cross-sectional self-administered on-line survey was distributed between 4th and 5th of October 2019 in the social media across Poland. A total of 100,026 recipients responded to the questionnaire and 93,636 valid respondents were included in the analyses.

Results: Out of respondents who had ever been pregnant, 32.2% reported at least one spontaneous abortion. The prevalence of miscarriage was correlated with age, parity, place of residence and the education level. The first symptom of miscarriage was a vaginal bleeding (45%) and abdominal cramps (21%), while 34% of respondents had no symptoms and found out during doctor's visit. No medical assistance was required after complete spontaneous abortion in 39.1% of cases.

Conclusions: Miscarriage is a common complication of pregnancy, but it is not yet fully understood. The goal of future medicine is to minimize the medicalization of spontaneous abortion and excessive medical intervention thanks to the awareness of natural miscarriage route.

Keywords: miscarriage, spontaneous abortion, pregnancy loss, risk factors, prevalence, induced abortion, Polish population

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Impact of levothyroxine therapy for maternal subclinical hypothyroidism on infant's neurodevelopment

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Introduction: Indication of levothyroxine for maternal subclinical hypothyroidism (SCH) is undetermined, despite that it has been properly administered for overt hypothyroidism (OH) in current clinical practice. This study was aimed to evaluate the effect of levothyroxine therapy for SCH and OH on improving offspring's neurodevelopment in infancy period in a real-world setting.

Methods: In this secondary data analysis of a prospective cohort study, pregnant women diagnosed with SCH at first antenatal visit were enrolled, compared to those with OH. Information of levothyroxine therapy and thyroid function was recorded. Primary outcome was the infants' neurodevelopment at 1, 3, 6, and 12 months of age, assessed by the Gesell Development Diagnosis Scale (GDDS). Subgroup analyses were performed stratified by preconception hypothyroidism, maternal TSH at enrollment, maternal TSH at delivery, and TPO antibody status. Sensitivity analyses were also conducted, by excluding participants who didn't receive levothyroxine treatment at first antenatal visit.

Results: A total of 442 participants were enrolled. Among them, 194 were in SCH group and 248 were in OH group. Women in SCH group were of younger maternal age, older gestational age and lower BMI at enrollment ($P < 0.05$). The percentage of women receiving levothyroxine was significantly lower in SCH group than that of OH group at first antenatal visit ($P = 0.003$), while this percentage was of no statistical difference at delivery ($P = 0.472$). Offspring of SCH group demonstrated a worse neuropsychological performance in SCH group than that of OH group, especially in gross motor capacity (at three-month old: 100.61 ± 8.96 vs 107.33 ± 13.82, $P < 0.01$; at one-year old: 102.54 ± 10.07 vs 104.64 ± 11.63, $P < 0.05$). These alternations were confirmed in subgroup analyses of preconception diagnosis, longitudinal maternal TSH follow-up at enrollment and at delivery, and TPO antibody status. Sensitivity analyses also supported these alternations.

Conclusions: Offspring born of maternal SCH demonstrated a slightly worse psychomotor performance in infancy compared to those born of OH, who received more vigorous levothyroxine therapy.

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Placental proteome in late-onset of fetal growth restriction (late FGR)

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Fetal growth restriction (FGR) occurs when the fetus does not reach its genetically programmed intrauterine potential for growth and affects ~5-10% of pregnancies. This condition is one of the leading causes of perinatal mortality and morbidity associated with obstetric and neonatal complications. Placental dysfunction in FGR causes an impairment in the transfer of nutrients and oxygen from the mother to the developing fetus. Maternal adaptations to placental insufficiency may also play a role in the pathophysiology of FGR. The present study aimed to compare the proteome of the placentas of 18 women with the physiological course of pregnancy and eutrophic fetus [estimated fetal weight (EFW) >10th percentile; control group] and 18 women with late FGR (EFW <10th percentile) diagnosed after 32 weeks of pregnancy, according to the Delphi consensus (study group). The U. Mann-Whitney test was

used to compare two independent groups. The R. Spearman correlation coefficient significance test was used to assess the existence of a relationship between the analyzed measurable parameters. $P < 0.05$ was considered to indicate a statistically significant difference. The tests showed the presence of 356 different proteins which were responsible for the regulation of gene transcription control, inhibiting the activity of proteolytic enzymes, regulation of trophoblast proliferation and angiogenesis and inflammatory response. In the FGR placental proteome, other detected proteins were mostly involved in response to oxidative stress, cellular oxidation and detoxication, apoptosis, hemostatic and catabolic processes, energy transduction protein interactions, cell proliferation, differentiation and intracellular signaling. The present study used chromatographic mass-spectrometry to compare the placental proteome profiles in pregnancies complicated by late-onset FGR and normal pregnancy. Comparative analysis of proteomes from normal and FGR placentas showed significant differences. Further research is needed to clarify maternal and fetal adaptations to FGR.

Keywords: proteome, fetal growth restriction, placenta, lipid metabolism, peptides, oxidative stress.

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Does overweight and obesity have an impact on delivery mode and peripartum outcome in breech presentation? A FRABAT prospective cohort study

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Introduction and aims of the study: 4% of all fetuses are in breech presentation at term. Although the optimal mode of delivery remains controversially discussed many patients can be offered a safe vaginal delivery with favorable maternal and fetal outcome. A maternal body mass index (BMI) within the normal range is proposed as an identification criterion for suitable patients. Since a substantial proportion of women expecting a breech fetus is overweight/obese clinical evidence is needed to counsel these patients properly regarding safe and successful delivery options.

Methods: Based on data from January 2004 to December 2020, a prospective cohort study was performed on women presenting with a breech fetus at term (> 37 weeks) at the Goethe University Hospital Frankfurt, Germany. 1639 patients intending a vaginal birth were included. According to the WHO's definition we formed two groups: overweight and obese patients (BMI ≥ 25kg/m^2) and patients with a BMI < 25kg/m^2. Maternal and fetal outcome were compared. Women with type-2-diabtes were excluded from the study.

Results: 370 (22,6%) women were overweight or obese. In total 1103 (67,3%) patients delivered vaginally. In women with a BMI ≥25kg/m^2, rates of cesarean delivery and epidural anesthesia were higher. The rates of post-partum hemorrhage and birth injuries did not differ between the groups. Also, no significant difference in adverse fetal outcome was seen. The percentage of newborns with a weight above 3.8 kg was higher in overweight or obese women.

Conclusion: If type-2-diabetes is excluded overweight and obesity should not be used as an exclusion criterion for attempting vaginal breech delivery. In our study, an increased risk of caesarean section after the onset of labor and a higher rate of epidural anesthesia was documented in overweight and obese mothers. Apart from an increased neonatal weight, fetal morbidity was comparable between the patient groups.

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Maternal thyroid function and free beta human chorionic gonadotrophin level in triploid pregnancies of paternal origin

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Introduction and objectives of the study: Triploidy is a frequent life-limiting genetic defect resulting from an extra haploid set of chromosomes. The course of pregnancy is affected by the parental origin of these extra chromosomes. Paternal triploidy is associated with a cystic appearance of placenta and high levels of maternal serum human chorionic gonadotrophin (hCG). As hCG unit can bind to the thyroid stimulating hormone (TSH) receptor, TSH levels are usually below normal values raising suspicion of hyperthyroidism.

The objective of the study was to analyse maternal thyroid function with regard to serum levels of β unit of hCG (β-hCG) in paternal triploid pregnancies.

Methods: Maternal serum β-hCG, TSH and free thyroxine (fT4) levels were tested in ten triploid pregnancies of paternal origin at the mean gestational age of 16.2 weeks (range: 12.4–19.3). A multivariate linear regression model was used to assess the association between tested variables.

Results: The mean β-hCG, TSH and fT4 levels were 545 241 mlU/ml; 0.32 μlU/ml and 1.8, respectively. In a multivariate linear regression model fT4 was associated with both TSH (coef -0.52; 95% CI 0.94-0.11; $p = 0.02$) and β-hCG (coef. 1.2 e-06 95% CI 1.38e-07 - 2.24e-06; $p = 0.032$). No patient presented with symptoms of hyperthyroidism.

Conclusions: Even though maternal serum β-hCG level was markedly increased and the TSH was below the normal values in all patients, fT4 was within normal values in most of the cases and no clinically relevant hyperthyroidism was reported. Our results indicate that fT4 was a better predictor of maternal thyroid function in patients with paternal triploidy and that the mechanisms of thyroid function compensation in pregnancy are very efficient, even in cases of excessive gland stimulation.

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Assessment of the birth status of children born by elective caesarean section before and after 39 weeks of gestation following in vitro fertilization

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The collected material presents 512 mothers with children whose pregnancies were ended by caesarean section at the Department of Obstetrics, Women's Diseases and Oncological Gynecology Central Clinical Hospital of the Ministry of Internal Affairs in Warsaw in the years 2004-2016.

The aim of this study was to asses the optimal time of an elective cesarean section at full term in an IVF pregnancy. Consistent with findings in the general population and prevailing recommendations, the expected result would be the better condition of the baby born by ECS following the 39th week of gestation.

The study group consisted of 362 mothers in pregnancies following in vitro fertilization and 150 mothers in spontaneous pregnancy, without the use of assisted reproductive technology. For the purposes of the project, only single pregnancies ending within weeks 37 to 41 of pregnancy were selected. The acquired parameters (time of delivery of pregnancy, Apgar score of the newborn, and whether respiratory medical interventions took place) were analysed to assess the condition of each neonate.

Planned delivery by elective cesarean section (ECS) currently takes place after the 39th week of pregnancy, in line with current common recommendations. This is related to studies finding an overall better birth condition of newborns in the general population, and especially with regard to the maturation of the lungs. Currently, there are no specific recommendations regarding cesarean section and the timing of delivery in pregnancies resulting from in vitro fertilization.

However, our statistical analysis of the collected material shows that the group delivered by ECS prior to the end of 39 weeks of pregnancy may have fewer respiratory system interventions and higher Apgar scores. Nevertheless results lack of statistical significance. In conclusion these findings may indicate a need for a bigger data base.

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Maternal obesity and pregnancy-related outcomes in an Irish population

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Introduction: Maternal obesity is a significant risk factor for unfavourable outcomes during pregnancy. However, the extent of this relationship is poorly defined in Irish mothers.

Aims: The aim of this study was to compare maternal and perinatal outcomes between obese and non-obese mothers in an Irish population.

Methods: A retrospective comparative study was conducted in a secondary level maternity unit for all births recorded between January 2018-January 2019. Women who underwent a termination of pregnancy <24 weeks or did not have a booking BMI were excluded. A total of 2,793 women were included in this study. BMI calculated at booking visit was used to categorise women as obese (BMI $\geq 30 kg/m^2$) and non-obese mothers (BMI $<30 kg/m^2$) and maternal and perinatal outcomes were compared between the two groups.

Results: Of 2,793 women included in this study, 2111 had a BMI <30 kg/m^2 and 682 had a BMI ≥ 30 kg/m^2. Obese women were less likely to experience spontaneous onset of labour (33.4% v. 48.1%, $p<0.001$) and more likely to be induced (37.2% v. 31.0%, $p=0.002$). Obesity was associated with a statistically significant increase in stillbirth, fetal macrosomia and emergency caesarean birth rates, whereas operative vaginal deliveries were significantly decreased. Miscarriage, shoulder dystocia, post-partum haemorrhage and spontaneous vaginal deliveries were reduced while elective caesarean births and low birth weight incidence were increased in obese mothers, however, these results were not statistically significant.

Conclusions: This study highlights the magnitude of obstetric risks that are associated with maternal obesity within Irish populations. Implementation of effective intervention strategies to reduce the number of obese women in pregnancy may have beneficial effects on pregnancy outcomes in Ireland.

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The metabolic syndrome and urinary incontinence in Maltese women

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Introduction and aims of the study: Urinary incontinence (UI) is a common and complex medical condition affecting women of all ages with various degrees of physical and emotional distress, thus affecting their overall quality of life (QoL). The metabolic syndrome (MetS) has been postulated to contribute, or even exacerbate, the symptomatology of lower urinary tract symptoms (LUTS). It is hypothesised that factors contributing to the development of the MetS are common in Maltese women attending the urodynamic clinic.

Methods: One hundred and two women attending the urodynamics clinic at the state-owned general hospital in Malta, participated in this cross-sectional study after obtaining informed consent. Age, body-mass index, menopausal status, history of previous vaginal delivery, history of instrumental delivery and blood pressure were recorded. Blood samples for glucose and lipids were withdrawn for analysis.

Results and discussion: The clinical diagnosis of stress urinary incontinence (SUI) showed good correlation with urodynamic diagnosis ($K=0.960$). Diabetes mellitus (DM) and overactive bladder (OAB) were shown to be significantly related (0.005, $p=0.004$). DM was significantly associated with SUI (0.159, $p=<0.000$). Menopausal women were found to have a higher incidence of mixed urinary incontinence (MUI) and SUI (0.041, $p=0.022$ vs. 0.000, $p=<0.000$). DM and the menopause were independent risk factors for the development of SUI (OR 6.603, $p=0.002$ vs OR 3.448, $p=0.013$) Hyperlipidaemia was associated with a lower mean cystometric capacity (-76.484, 95% CI -134.473 to -18.495). Vaginal deliveries have been shown to be associated with urodynamic stress incontinence (0.050, $p=0.028$).

Conclusion: DM and the menopause have been shown to be independent risk factors for Maltese women with UI. The menopause has been shown to be significantly associated with the development of MUI and SUI. Hyperlipidaemia in these women has been shown to decrease the mean cystometric capacity. Vaginal deliveries have been associated with urodynamically-proven stress incontinence.

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Effectiveness and safety of single incision, six-point fixation transvaginal mesh Ingynious anterior (A.M.I) in pop surgery

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Introduction, aims of the study: Treatment of pelvic organ prolapse with transvaginal mesh (TVM) remains controversial due to the risk of complications. Nevertheless, it appears that there is still a space for modern TVM systems. The aim of the study was to evaluate the effectiveness and safety of Ingynious anterior (A.M.I) system - in combined anterior and apical defect.

Methods: 86 women were enrolled to the prospective study (2019-2022). Inclusion criteria were POP stage ≥ III in the apical and anterior compartment and contraindications or high risk of laparoscopic procedures. Sexually active patients were excluded. Urogynecological examination (POP-Q, POPDI and IIQ-7 questionnaires), was performed before surgery and 4- 12 months postoperatively.

Results: Mean Aa point was +2.46 +/-1.06 cm before surgery vs -1.78 +/-1.24 cm postoperatively. Mean Ba point equaled +3.88 +/-1.65 vs -1.71 +/-1.46 cm ($p < 0.001$). Mean C point was 2.26 +/-2.6 cm before vs -4.6 +/-2.92 post-surgery ($p < 0.001$). Improvement in the Bp point value was also observed (-0.12 +/-2.42 vs -1.44 +/-1.42; $p < 0.001$). In POPDI, significant improvement ($p < 0.001$) in all the investigated fields was demonstrated, except defecation problems which remained unaffected. No significant differences in the IIQ-7 were observed.

In 2 cases, a symptomatic haematoma occurred and were managed conservatively. In 2 cases ureter kinking that required mesh ex-plantation was diagnosed. Relapse of POP in anterior and apical compartment was observed in 1 patient. In 2 cases exposition of the mesh was diagnosed with no clinical manifestation. In 2 cases partial excision of suburethral portion of the mesh was performed the day after surgery due to voiding dysfunction.

Conclusions: Ingynious anterior is a highly effective system as far as objective and subjective results are concerned. The risk of urether kinking as the most serious complication seems to be an obligatory indication to pre and post-operative kidney US examination.

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Assocations of sleep quality, urinary incontinence and quality of life in type 2 diabetic women

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Introduction and aims: Poor sleep and urinary incontinence (UI) negatively affect health related quality of life (HRQoL). The aim of the study was to investigate the associatons between sleep, UI and HRQoL in type-2 diabetic women.

Methods: This study was carried out with 48 women with type-2 diabetes. The Urinary Distress Inventory (UDI-6) was used to evaluate UI type and the impact of UI on their quality of life. The Pittsburgh Sleep Quality Index (PSQI) and Short Form 36 (SF-36) were administered to assess the sleep quality and HRQoL, respectively. All parameters were reported using descripted statistics, t-test, Mann-Whitney U Test.

Results; In 48 women aged 60,25 ± 7,36 years, mean diabetes duration was 13,55 ± 8,74 years. Of them, 77,1% had poor sleep quality (total PSQI score ≥7). Thirty one women (74%) had UI (stress UI in 29%, urge UI in 22,6 % and mixed UI in 48,4%). There were correlations of diabetes duration with night time voiding frequency ($p < ,05$) and sleep disturbance ($p < ,05$). The HgA1c level was associated with sleep duration ($p < ,05$) and sleep efficiency ($p < ,001$). Also, the night time voiding frequency was correlated sleep disturbance ($p < ,05$), sleep duration ($p < ,05$) and SF-36 pain ($p < ,05$). The SF-36 general health was related to diabetes duration ($p < ,05$), night time voiding frequency ($p < ,05$). In women with UI, there were associations of UDI-6 score with night time voiding frequency ($p < ,05$), general healht ($p < ,05$) and pain subdomains ($p < ,05$) of SF-36. The age and HgA1c levels were higher in women with UI. Sleep quality was worse in women with MUI than those in women with SUI and UUI.

Conclusions: The prevalences of UI and poor sleep quality were high and diabetes duration, HgA1c level, UI, poor sleep quality and HRQoL were correlated wiht each other in women with type-2 diabetes.

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Psychiatric disorders in women with pelvic floor disorders

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Introduction: Nowadays pelvic floor diseases are very often diagnosed and the frequency of this disorders is very high ageing population in developed countries. Most of authors agree that overactive bladder syndrome negatively influence many aspects of affected patients including their sanity.

The aim of the study: The aim of our study was to analyse the impact of other pelvic floor disorders on mental health as compared to healthy population as well as the influence of successful surgery on their complaints.

Methods: 526 patients (144 in control group – admitted to the Clinic for non urogynecological diagnostic and 152 with stress urinary incontinence and 230 with pelvic organ prolapse) were included to prospective case control study (2020–2022). All patients completed questionnaires BDI (Beck Depression Inventory), STAI (State-Trait Anxiety Inventory) and ISI (Insomnia Severity Index).

Results: In patients with pelvic organ prolapse we did not observe statistical differences in STAI and BDI as compared to healthy subjects, while insomnia severity index was significantly higher ($p < 0,001$). As far as stress urinary incontinence is concerned we showed significantly higher anxiety level in STA inventory ($p < 0,001$). Moreover, SUI deteriorated sleep quality measured in IS index ($p < 0,001$). Signs of depression were also more expressed in those patients; however, the difference was not statistically significant ($p = 0,012$).

Conclusions: We showed that similarly to OAB syndrome, women suffering from stress urinary incontinence suffers from sleep disorders, higher level of anxiety and depression as compared to healthy subjects. In POP patients only sleep quality was worsened probably because of concomitant lower urinary tract symptoms.

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Recurrent Uterine Tumor Resembling Ovarian Sex Cord Tumor (UTROSCT): A case report and systematic review

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Introduction and aims: Uterine tumors resembling ovarian sex cord tumors (UTROSCT) are rare uterine neoplasms of unknown etiology. Less than 100 cases have been described in literature and, although generally considered to be neoplasms with low malignant potential, uterine and extra-uterine recurrences have been reported it should be kept in mind for patients with UTROSCT.

Methods: A 57-year-old postmenopausal woman was referred to our hospital for the evaluation and management of postmenopausal bleeding. Transvaginal ultrasonography revealed a 6 cm uterine mass with intrinsic cystic degeneration. The preliminary diagnosis was uterine leiomyoma. The patient underwent a total hysterectomy with bilateral salpingo-oophorectomy. Intraoperative both ovaries and fallopian tubes were grossly normal, Douglas lavage cytology was malignant cells free and peritoneal dissemination was absent. The clinicopathological and IHC findings confirmed diagnosis of UTROSCT. The tumor recurred in the pelvis at 30 months after the initial diagnosis and regular follow-up. MRI revealed tumor in the right pelvic sidewall, 96x82x78mm in diameter with no pelvic anatomical structures involvement or free fluid in the abdomen and pelvis cavity. No distant metastases was detected.

Discussion: The arrangement of the recurrent malignant cells was closer, the nucleus atypia was more pronounced, and the cells demonstrated a more briskly mitotic activity (15 mitotic figures/10 HPF).The Ki67 indeks increased significantly (from 10% to 35%). For the recurrent tumor, both the clinical characteristics and the histological morphology of the recurrent neoplastic cells showed a more malignant behavior. Patient underwent complete tumor resection and scheduled for adjuvant chemotherapy.

Conclusions: With uncertain malignant potential and risk of relapse, these patients should be closely followed up. This article summarize the prognostic factors of recurrence UTROSCT and highlights clinical-pathological characteristics, treatment options, prognosis and outcome of UTROSCT.

Keywords: UTROSCT, recurrence, malignant behavior, prognostic factors.

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Placental site trophoblastic tumour: A case report and literature review

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Introduction: Placental site trophoblastic tumour is a rare type of gestational trophoblastic neoplasia (GTN) that evolves from unrestricted proliferation of intermediate trophoblasts at placental implantation site. Its incidence is approximately 1 per 100,000 pregnancies. Together with epithelioid trophoblastic tumour they make up only 1-2% of all GTNs.

Methods: A 42-year-old patient, with a history of one surgical abortion and 4 vaginal births (the last one 12 months earlier), presented with abnormal uterine bleeding followed by amenorrhea. In 3 months the USG findings changed from 1cm of irregular endometrium and intramural myoma of 2.9cm to an intrauterine irregular mass of 3.8 x 4.2cm. The laboratory results showed a modest rise in hCG levels (74 U/L). Based on MRI findings the tumour was described as an intrauterine heterogeneous mass of ~6.2 x 4.7 x 5.8cm with multiple arteriovenous malformations and suspected invasion into the myometrium.

Results: In order to clarify the diagnosis a diagnostic hysteroscopy was performed. After the biopsy, however, the operation was converted into an open hysterectomy due to uncontrollable bleeding from the tumour. The diagnosis of placental site trophoblastic tumour was made based on pathohistological findings. A CT scan later showed metastases in the lungs which were confirmed by biopsy. The patient is now receiving polychemotherapy.

Conclusions: Gestational trophoblastic diseases are a group of rare and very rare malignant tumours. Patient history, USG findings and hCG levels play a key role in forming the initial diagnostic hypothesis. There are many differences in the management of GTNs in comparison to other malignant diseases which is why early referral to an oncogynaecologist is crucial.

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Ovarian carcinosarcoma spread limited to the hernial sac.

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Background and objectives: Ovarian carcinosarcoma (OCS) is a very rare tumor composed of a mixture of both carcinomatous and sarcomatous elements. Detection rate is approximately 1% of all women with ovarian tumors. It is characterized by fast and aggressive growth. OCS biology is still poorly known. Most cases are diagnosed at the advanced stage with a five-year survival rate of less than 20%.

Methods: This case report was prepared on the basis of a literature review in Pubmed and Medline databases and medical records of the patient treated in Ist Chair and Department of Gynaecologial Oncology and Gynaecology.

Case presentation: A 55-year-old woman was admitted to our Clinic due to the suspicion of ovarian cancer. The patient was obese with a massive abdominal hernia, reporting only an enlarged abdominal circumference and lower abdominal pain. No previous history of surgeries. Imaging studies revealed a tumor of the left ovary, a hernia of the linea alba and a suspicion of metastasis in the liver. During the operation, the intraoperative examination showed the presence of poorly differentiated carcinoma in the left ovary, and visible metastases in the greater omentum only in the hernial sac. Modified radical hysterectomy with adnexa, excision of the greater and lesser omentum, and repair of the linea alba hernia were performed. The final histopathological result showed ovarian carcinosarcoma morphology. The patient undergo an adjuvant chemotherapy afterwards.

Conclusion: OCS metastases occurring only in the hernial sac are extremely rare. This may have positive implications for patient survival. Given its aggressive nature and poor prognosis, OCS require treatment by radical surgical resection, chemotherapy and careful follow-up with CT or MR. Due to the high heterogeneity of OCS, further research is needed to identify and target molecular drivers to improve the treatment and survival.

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Morbidly adherent placenta as a cause of peripartum hysterectomy in Slovakia

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Introduction and aims: Morbidly adherent placenta (MAP) is one of the major risk factors for peripartum hysterectomy (PH) in developed countries. The main aim of this study was to assess the PH cases associated with MAP in Slovak Republic. Additionally, we wanted to explore demographic parameters, associated clinical circumstances, complications, maternal and fetal outcome.

Materials and methods: This was a retrospective population-based study of PH cases associated with MAP in Slovakia between January 2012 and December 2020. Data were obtained from the standardized anonymous questionnaires that are completed in Slovakia for any case of PH and MAP.

Results: In the studied period, we analyzed 397 cases of PH and 168 cases of MAP. A total of 151 (89.9 %) women with MAP were managed by hysterectomy. MAP was the most common reason for the PH (38.0 %). Placenta accreta, increta and percreta were present in 56.3 %, 28.5% and 15.2% respectively. In 60 (39.7 %) cases was MAP combined with placenta previa. 127 (84.1 %) patients had previous uterine surgery. Up to 119 (78.8 %) of MAP had been diagnosed at the time of delivery. PH was preceded by unsuccessful uterine-saving procedure in 24 (15.9 %) of cases. The average estimated blood loss was 1,668 ml. A packed red blood cells transfusion was required in 138 (91.4 %) women and fresh frozen plasma in 118 (78.1 %) women. Fibrinogen and tranexamic acid were used in 36 (23.8 %) and 25 (26.3 %) women respectively. A total of 58 (38.4 %) women required admission to an intensive care unit. The mortality rate of MAP patients was 1.3 %.

Conclusion: An increased incidence of MAP and PH over the recent years secondary to the increased caesarean section rates in Slovakia highlighting the need to improve the prenatal diagnosis and management of MAP.

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Obstetric venous thromboembolism risk – The 28 week re-check

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Venous thromboembolism (VTE) affects 1/100,000 women and is the leading cause of direct maternal deaths. Recent reviews suggest 89% of these women have identifiable risk factors. The MBRRACE-UK 2021 suggested the review of women's VTE risk at 28 weeks with recommendation that they should be re-weighed.

The aim of this project was to evaluate adherence to local and national guidance on VTE risk assessment, with suggestion and implementation of improvement in line with MBRRACE-UK 2021.

A retrospective audit was conducted in a single trust unit in Northern Ireland in December 2021. 36 patients' notes were reviewed to assess the compliance, completeness, and accuracy of VTE assessment at booking, 28 weeks, on antenatal admissions and postnatally.

Completion rates were as follows: booking (97.2%), 28 weeks (22%), on antenatal admissions (100%) and postnatally (100%). No women had their weight re-checked at 28 weeks.

From these results it was clear that VTE risk assessment at 28 weeks is poorly assessed and recorded. On investigating the cause, it was noted that at booking and postnatally there is a VTE risk assessment proforma whilst there is none at 28 weeks. A 28-week sheet was thus created and to be inserted into booking folders to be used at 28-week appointments with the re-weighing of patients also to be introduced.

A re-audit of 36 postnatal patients notes in August 2022 demonstrated a 30.5% completion rate of the 28-week VTE risk assessment with the presence of the proforma in only 19/36 of notes (57.9%). Only 1 patient was recorded to have been re-weighed.

We concluded that whilst the introduction of the proforma had resulted in an 8% increase in patients who had their 28-week VTE risk re-assessed and documented there still appeared to be a considerable lack of awareness and completion of the new proforma.

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Foley catheter as a tourniqet for peri-partum hemorrhage prevention in patients with PAS

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Introduction and aims of the study: Postpartum hemorrhage is one of the most difficult situations the obstetricians may face. One of the complications in obstetrics often leading to severe bleeding and a need for urgent hysterectomy is placenta accreta spectrum (PAS) what increases the risk death of the mother and the child. The aim of the study was to demonstrate the feasibility of the use of the Foley catheter as a tourniquet during peripartum hysterectomies.

Methods: All patients who underwent peripartum hysterectomy due to any cause and had the bilateral Foley catheter used as a prevention of excessive haemorrhage during the procedure were included in the analysis. After a delivery of the fetus, a sterile Foley catheter (16 French or 18 French, upon availabilty) was slid down (caudal) to the lowest point of uterus, tightened and fixed with kocher forceps at the level of the uterosacral ligament to stop bleeding, then a hysterectomy was performed in the usual manner.

Results: The mean ± SD procedural duration was 89 ± 17 minutes. The mean ± SD blood loss associated with the procedure was 4.0 ± 1.7 g/dL (2.5 ± 1.1 mmol/L), with the most significant loss observed at 7.0 g/dL. In total, 7 of 11 women required urgent transfusion of blood components. In eight patients, the final diagnosis of PAS was made, with six cases of placenta increta and two of placenta adherens. None of the patients required intensive care management peri- and post-operatively and none of the patients died.

Discussion and conclusion: The technique seems to be an effective method to reduce bleeding during perinatal hysterectomy in the case of incorrect placental implantation. It reduces blood loss during the procedure, which improves operating environment and condition of the patient after surgery. It will also generate lower costs related to the patient's hospitalization. The method we propose is simple and cheap to perform.

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Neonatal outcomes in planned versus emergency cesarean deliveries for placenta praevia

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Introduction and aims of the study: The aim of this study was to investigate neonatal outcome differences between planned (PCD) and emergency cesarean delivery (ECD) for women with placenta praevia (PP).

Methods: A retrospective cohort study was conducted in a tertiary referral hospital between 2015 and 2022. PP patients who were delivered at the scheduled time were included in the PCD group (n = 94). Participants with PP delivered in an emergency setting were assigned to the ECD group (n = 58). Neonatal outcomes as prematurity, APGAR score, birth weight were compared between two groups.

Results: Median APGAR score in PCD was 8 (2–10) 1 minute after birth and 9 (6–10) 5 minutes after birth. ECD was significantly associated with lower APGAR scores 1 ($p = 0.039$) and 5 ($p = 0.013$) minutes after birth. General anesthesia during cesarean delivery was associated with lower APGAR scores 1 ($p = 0.002$) and 5 ($p = 0.02$) minutes after birth compared to regional anesthesia. ECD was significantly associated with prematurity (28.7 % vs 62.1 %, $p < 0.001$). Median gestational age during delivery was shorter in ECD (35 (24–41) weeks) compared to PCD (37 (33–40) weeks), $p < 0.001$. Higher rates of intrauterine growth restriction (IUGR) were noticed in the ECD group (4.3 % vs 19.0 %, $p = 0.003$). Median birth weight in the ECD group was 2517 (544–3980) grams, significantly lower ($p < 0.001$) compared to PCD (median 3230 (1780–4275) grams). The ECD group was associated with admission to neonatal intensive care unit (NICU) (11.7 % vs 27.6 %, $p = 0.013$). Perinatal death rates did not differ between the groups (0.0 % vs 3.4 %, $p = 0.07$). Two cases of perinatal death that occurred in the ECD group were related to severe prematurity.

Conclusions: Better neonatal outcomes as higher APGAR scores, higher median birth weight, lower rates of prematurity and IUGR were associated with PCD compared with ECD. Admission to NICU, prematurity rate did not differ between the groups.

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Severe maternal morbidities requiring intensive care units admission in the Slovak Republic

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Introduction and aims: The work focuses on the life threatening severe maternal morbidities whose clinical conditions required subsequent treatment in intensive care units (ICU) in Slovakia.

Methods: The analysis of reasons to ICU admissions in Slovakia in the years 2012-2020 according predefined criteria was done. The standard questionnaires (adopted from International Network of Obstetrics Survey System for Slovakia) from all obstetrics hospitals were retrospective analyses. The reasons of ICU admission were divided into 9 categories: peripartum hemorrhage, hypertensive diseases, thromboembolism, cardiovascular diseases, sepsis/severe infections, metabolic diseases, anesthesiology complications, gastroenterological problems and others.

Results: Out of 436,136 births, there were 655 cases of ICU admission (incidence 1.5 per 1,000 births). Out of them 98 was Roma nationality (incidence 8.8 per 1,000 births). The average age of women was 30.7 years (range 14 - 46), and 29.7% of these women was aged over 35 years. 65% of mothers suffered from overweight and obesity. 82.3% of births were performed by caesarean section, out of them 59.3% by emergency caesarean section. Severe postpartum hemorrhage was a major cause of ICU admission (47.8%) and included hysterectomies, uterine ruptures, placental abruption, invasive placentas, placenta praevia, and uterine atony. The 2nd most common reason (25.3%) were hypertensive diseases (preeclampsia, eclampsia and HELLP syndrome). The 3rd most common reason (4.6 %) was sepsis and severe maternal infections. The mortality rate of ICU admission patients was 2.4%.

Discussion: Slovakia, in international comparison, belongs to countries with lower incidence of mother ICU admission, and with higher frequency of peripartum hemorrhage, complications after caesarean section an age over 30 years.

Conclusion: From the data that has been analyzed to date, stand out as significant risk factors for severe morbidity requiring ICU admission in Slovakia are mother age, caesarean section, Roma nationality, overweight and obesity, and bad mothers prenatal care compliance.

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Birth outcomes among pregnancies with covid-19 infection

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Introduction and aims of the study: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has started a COVID-19 pandemic in 2020. Pregnant women are especially vulnerable to respiratory infection and insufficient studies are made to investigate the pregnant patients with COVID-19 infection. The aim of this research was to examine birth outcomes in pregnancies with COVID-19.

Methods: The retrospective case-control study was conducted using the data from the Department of Obstetrics and Gynecology of the Lithuanian University of Health sciences (LUHS) Birth Registry from 2020 to 2022. Two groups of patients were compared in the research: 140 pregnant women with positive (group 1) and 140 with negative (group 2) COVID-19 PCR test. Data processing and analysis were performed with IBM Statistics SPSS. Results with values of $p < 0.05$ were considered statistically significant.

Results: Results demonstrate that women with COVID-19 were more likely to undergo a Cesarean section than the patients without COVID-19, 31,4% and 20,1 % respectfully ($p = 0,031$). The main indications for Cesarean sections were severe COVID-19, fetal distress and multiple C-sections. Significantly more preterm infants were born in group 1 ($p = 0,037$), consequently there were notable differences in gestational age between groups (37,67 weeks in group 1 and 38,72 in group 2). The mean newborn weight was 3199 g in COVID-19 positive and 3494 g in COVID-19 negative group, therefore, results confirm that pregnant women with COVID-19 disease are more likely to give birth to smaller weight infants ($p < 0,001$).

Conclusions: The study indicates that more Cesarean sections are performed on pregnant women who acquired COVID-19. In addition, they are more likely to have preterm newborn, compared to those without

COVID-19 infection. The diagnosis of COVID-19 is significantly linked with the tendency to have smaller weight infants.

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Maternal mortality in Slovak republic in the years 2007 – 2020

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Introduction: European Perinatal Health Report (2018) reported maternal mortality ratio (MMR) in European Union (EU) 6.2 and 4.1 in the years 2006-2010 and 2011-2015, and in Slovak Republic (SR) 8.2 and 4.3 per 100,000 live births respectively.

Methods: MMR data from routine statistic from Statistical office (SO) SR was compared with data from enhanced statistic Slovak Gynaecologic & Obstetric Society (SGOS) in the years 2007-2020. Data of maternal mortality from SGOS registry was analysed. Maternal mortality included maternal deaths during pregnancy or within 42 days of the end of pregnancy.

Results: SO in observed period registered 31 maternal deaths (pregnancy related it means direct and indirect) and no accidental death. SGOS in the same period revealed total 90 cases of maternal deaths, out of them 79 was pregnancy related and 11 accidental deaths. Underestimation of pregnancy related deaths from routine SO statistic was 61% and total maternal death 66% in comparison with data from SGOS. Direct MMR in this period was 4.09 (32 maternal deaths), indirect MMR was 6.02 (47 maternal deaths) and pregnancy-related death ratio was 10.11. Pregnancy-associated but unrelated maternal death ratio was 1.41 (11 maternal deaths). MMR in optimal reproductive age (20-29 years) was 5.2. In adolescent pregnant (age under 20) MMR was 15.6. MMR increased with age since 12.3 to 20.3 and 40.0 in the age group 30-34, 35-40 and over 40 respectively. The leading causes of maternal mortality in SR were bleeding, non-obstetrical infections and cardiovascular disorders.

Discussion: MMR in the EU is low according to routine statistic, but the underestimation of these data according to enhanced statistics is 10-62%.

Conclusions: MMR in SR according data of SGOS was one of the highest in the EU so, it is necessary to look for ways to reduce maternal mortality and improve data collection.

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Obstetric care during the wartime

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Due to the existing life conditions in Ukraine, it is obvious that women face traumas which used to be common for men during wartime. It should be pointed out that Women are twice as likely to be diagnosed PTSD compared to men.

We investigated the impact of trauma and PTSD on the reproductive system of female military personnel, women from the de-occupied territories that had been under occupation for a long time, and Ukrainian women who remained on the territory of Ukraine during the full-scale invasion and terror of Russia.

Women was diagnosed with hormonal background disorders, which led to anovulation, LPH, apoptosis of the oocyte. Due to that significant reproductive health indicators worsened: infertility, pregnancy miscarriage, endometrial pathology, multifolus ovarians, PMS, breast pathology, early menopause, premature ovarian exhaustion, severe climax.

For now we have a scientifically based comprehensive approach to the preservation of the reproductive health of the nation and the prevention of structural gynecological and somatic pathology in different age groups, which contributes to the positive dynamics of certain components of reproductive health – the frequency of abortions, complicated childbirth, premature birth, low-weight children, delayed development and growth of the fetus, the formation of a tendency to metabolic disorders and mental sweats of offspring, levels of maternal and infant losses.

Prevention of structural obstetric and gynecological pathology of Ukrainians will eliminate the financing of high-cost treatment. Conducting trainings for related specialists (first line of care) providing clear instructions in case of urgent conditions (cessation of AUB – abnormal uterine bleeding, for example).

Priority objectives: birth rate increase, improvement of reproductive health, decrease in cancer and gynecological morbidity, reducing maternal mortality and child mortality and morbidity rates.

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Placenta praevia: Maternal complications and pregnancy outcomes

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Introduction and aims of the study: Women with placenta praevia (PP) are at increased risk of maternal and neonatal complications, adverse outcomes. The aim of this study was to identify related maternal complications and outcomes in cases of PP compared with planned cesarean section (CS).

Methods: A retrospective case-control study was conducted in the Hospital of Lithuanian University of Health Sciences Kaunas Clinics between 2015 and 2022. 168 cases of PP were included and compared with the control group of 522 patients who underwent cesarean delivery due to fetus breech presentation without placenta previa.

Results: PP was significantly associated with antepartum bleeding at second (19.2 % vs 0.4 % , $p<0.001$) and third trimester (54.4 % vs 1.1 %, $p<0.001$). Antepartum hemorrhage complicated 23.2 % PP cases with median blood loss of 400 (30–1700) ml. PP had a significantly higher rate of placenta accreta spectrum disorders (25.1 % vs 1.9 %, $p<0.001$) and placental abruption (6.6% vs 1.5%, $p<0.001$). No statistically significant difference was observed in rate of emergency CS (38.2% vs 36.8%, $p=0.75$). PP was significantly associated with increased rates of major or massive bleeding during CS (40.1 % vs 1.9 %, $p<0.001$) with median blood loss of 1500 (750–5000) ml in PP group and 1500 (1100–2000) ml in control group. PP group had significantly higher rates of blood product transfusion (15.0 % vs. 0.8 %, $p<0.001$) and hysterectomy (6.6 % vs 0.0 %, $p<0.001$). All cases of hysterectomy were associated with placenta accreta spectrum disorders.

PP cases required intra-arterial balloon occlusion (7.7 % vs 0.0 %, $p < 0.01$).

Conclusions: Placenta praevia is associated with placenta accreta spectrum disorders, antepartum hemorrhage, abnormal bleeding during CS and maternal blood transfusion. Cesarean hysterectomy is an adverse maternal outcome of placenta praevia.

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The dislocation of the intrauterine device (IUD) into the uterine cesarean section scar defect has a high risk of recurrence

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Introduction: The uterine cesarean section scar defect causes postmenstrual uterine bleeding. The niche, particularly with a thin residual myometrium, is a risk factor of uterine rupture at the end of pregnancy and abnormal implantation of the GS or placenta in the area of the uterine scar. IUDs are an effective method of contraception and those with levonorgestrel (IUD-LND) also reduce menstrual bleeding and consequently postmenstrual bleeding. Nevertheless, the presence of a uterine scar defect is a risk factor for the IUD to dislocate into the diverticulum.

The aim of this work is to present the results of an attempt of reposition the IUD back to the uterine cavity.

Methods: IUD displacement into the scar defect was observed in 5 patients (3 with IUD-Cu, 2 with IUD-LNG). The IUD was repositioned into the uterine cavity and USG-TV confirmed the correct localization. Follow up was performed at 1 month and 6 months after the procedure, or if abnormal uterine bleeding had occurred.

Results: At the end of a 6-month observation period all (100%) patients had the IUD dislocated into the myometrial scar defect: in 3 patients with symptoms of AUB (heavy and/or prolonged) after 2 weeks to 3 months, in 2 patients with subtle symptoms during a scheduled check-up. In 3 patients, the IUD was repositioned to the cavity again, but after about 1-1.5 months it relocated to the diverticulum.

Conclusion: A single displacement of the IUD to the uterine scar cesarean section defect will result in its recurrent dislocation. A disorder of the architecture of the uterine anterior wall is a probable cause of a disturbance in the distribution of forces during uterine contractions, however other factors must also be considered.

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Cervical length regeneration after large loop electroexcision

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Introduction: Large loop electro-excision (LLETZ) is a treatment method of the high grade cervical intraepithelial neoplasia. LLETZ increases preterm labor risk due to mechanical cervical defect defects and an alteration of the cervical barrier. Cervical length (CL) regeneration after LLETZ and its subsequent impact on the pregnancy outcome is unclear. Some data state that cervical regeneration is completed after six months and is 83.4% (±10.8%) from the initial length.

Aim: The aim of the present study is to calculate the CL regeneration three to six months after the LLETZ procedure.

Methods: A prospective cohort study was performed in Riga Maternity hospital from 2021-2022. 12 women of reproductive age who were scheduled for LLETZ were included in the study. CL measurements were carried out with a predefined ultrasound measurement technique by one operator before and 3 and 6 months after LLETZ. Cone length (CoL) was measured right after LLETZ with an electronic caliper. CL regeneration was calculated as CoL minus the cervical deficit at 3/6 months divided by CoL and multiplied by 100. CL regeneration after 3/6 months was compared with Paired sample T-test.

Results: Out of 12 patients, 10 women had all the necessary measurements. The mean women's age was 30.14 years (26-40 years). The mean excisional cone depth was 11.26 mm (SD +/- 4.2). CL regeneration after 3 months was 48.8% (SD +/- 13.14) and after 6 months 61.4% (SD +/- 12.3). CL after 6 months was increased by 12.5 % when compared with 3 months (CI 95% 4.57-20.5) with statistical significance ($p < 0.05$).

Conclusions: CL regeneration is the most marked during the first three months and continues at least until six months after LLETZ. More research is needed to better understand cervical regeneration over a longer period.

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Ultrasound evaluation of the influence of cube pessary on female's pelvic floor

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Introduction: Different pessaries are used to treat POP without unified usage recommendations with little information concerning their influence on pelvic floor. Pelvic floor ultrasound (PFU) allows to study and quantify different aspects of pelvic floor function.

Aims of the study: Analyzing the influence of cube pessary (cube) on female's pelvic floor.

Finding out if puborectalis avulsion and hiatal ballooning will make a change.

Methods: 274 women with POP had prospective evaluation: interview, clinical with POP-Q, 2D/4D transperineal PFU before and after fitting cube.

At rest, PFMC and Valsalva (VAL) during PFU we evaluated parameters: bladder neck (BN) position and mobility (H, D, vector), hiatal dimensions (A, C, L). Ballooning was defined as hiatal area > 25 cm2 at VAL (25+). Puborectalis avulsion was identified at TUI at PFMC (AVUL1).

Results: Cube vs. no pessary:

General.

rest: H bigger (1.7/1.49,$p < 0.003$), D smaller (0.85/1.32, $p < 0.00000$), hiatus- NS,

PFMC: NS,

VAL - smaller all parameters BN: H (0.83/1.66,$p < 0.00000$, D (-0.21/-0.31,$p < 0.02$), vector (1.0/1.77,$p < 0.00000$), and hiatal: A (-

4.22/-6.44,p < 0.00000), C (-1.33/-2.1,p < 0.00000), L (-0.37/-0.51, p < 0.02).

Subgroups.

25 + vs. < 25

rest: NS,

- PFMC: bigger H (0.18/-0.01,p < 0.02), smaller D (-0.51/-0.3, p < 0.03),

- VAL - bigger: H (1.17/0.75,p < 0.008) and A (-3.12/-1.36, p < 0.004).

AVUL1 vs. AVUL0: NS.

Smaller subgroups

25 + AVUL0 vs. < 25AVUL0: bigger H (0.21/-0.06,p < 0.02), smaller D (-0.55/-0.27,p < 0.02),

< 25AVUL1 vs. < 25AVUL0: smaller vector (-0.08/0.1,p < 0.04).

Conclusions: At rest and PFMC cube had no influence on hiatal dimensions, but at rest shifted BN up and towards symphysis pubis and at VAL gave protection to pelvic floor (BN, hiatus).

In patients with ballooning comparing to those without ballooning at VAL cube was less protective on hiatal dimensions, but gave better protection to BN. Cube may improve PFMC, but rather in patients without avulsion.

Avulsion does not modify the influence of cube on pelvic floor.

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Learning from the implementation of clinical empathy training: an explorative qualitative study in search of the barriers and facilitators

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Introduction and aim of the study: Amid concerns about the decline of empathy during the clinical training of medical clerks, evidence that empathy improves patient outcomes suggests potential for teaching empathy in ways that will affect the knowledge, attitude and behavior of medical clerks. This research aims to identify the barriers and facilitators of the implementation of a specific clinical initiative to enhance the empathy skills of clerks, namely the training of clerks to act as a medical coach'.

Method: We conducted an explorative qualitative study based on interview data collected and analyzed using reflexive thematic analysis and the readiness for change theory. We conducted semi-structured interviews with relevant stakeholders in this particular qualitative study. Thematic analysis was based on open and axial coding using ATLAS.ti 9, which facilitated the emergence of common themes of interest and meaning for the study.

Results: A total of 13 relevant stakeholders participated as interviewees in our study. Our analysis generated 6 main themes which can provide insights into why the implementation of the MedGezel educational innovation failed so far. The following themes emerged: the case for change: why change?; practical necessity; leadership; management and resources; staff culture; and alignment with the corporate strategy.

Discussion: The implementation failure can be partially explained as resulting from the personal attitudes and choices of participants, who struggled to reconcile a vision that they liked with side effects that they feared. While participants repeatedly mentioned management and leadership issues, these organizational issues seemed less important as they could be easily resolved in practice. What was more important and fatal for the initiative was its lack of alignment with staff culture, despite its alignment with corporate strategy.

Conclusion: This investigation into the barriers and facilitators influencing the implementation of the MedGezel program identified 6 explanatory themes, the most impactful one being staff culture.

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Improved urinary incontinence outcomes following vaginal erbium laser treatment

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Introduction and aims: Urinary incontinence is closely associated with the genito-urinary syndrome of menopause (GUM). Vaginal erbium laser therapy is being increasingly advocated as one of the non-hormonal treatments of GUM. The aim of this study is to investigate the effect of vaginal erbium laser treatment on urinary incontinence outcomes.

Methods: A validated International Consultation on Incontinence Questionnaire 10 – UI Short Version (ICIQ-10 – UI) was offered to patients attending laser treatment sessions over a two year period from 2018 to 2020. The questionnaire was administered to the patients at baseline, before the first laser treatment session, as well as before any subsequent session such as to compare outcomes between baseline and first treatment session, baseline and second treatment session and outcomes between first and second session respectively. The patient's informed consent was taken at every stage and the study was carried out according to the WMA Declaration of Helsinki criteria.

The results of the questionnaires were inputted into the SPSS statistical software package version 28. The paired T-test was used to check for any statistically significant differences between baseline and following the first session, between baseline and following two sessions and between one session and two sessions respectively for each of the component questions of the ICIQ-10 questionnaire.

Results: A total of 24 patients did at least one laser treatment session, of which 14 had another subsequent session. The ICIQ score decreased from 10.29 + /-4.16 at baseline to 7.29 + /-4.55 after two treatment sessions (p = 0.023), showing statistically significant improvement. Improvement in the ICIQ score was also noted after one session, 9.54 + /-4.62 to a score of 8.00 + /-4.46 (p = 0.012). Similar statistically significant results were obtained with the ICIQ score component questions of frequency, amount of urinary incontinence and quality of life effect.

Conclusions: Vaginal erbium laser treatment is associated with improved urinary incontinence outcomes.

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Developing a specific health pathway for infertile patients with obesity. Are we taking too many risks?

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Introduction: Obesity decreases fertility, success of ART and increases risks of having pregnancy complications.

Aim of the study: Our aim was to evaluate the impact a specific health pathway for infertile patients with obesity (OPIOM) on maternal, fetal and neonatal risks. Secondary objectives were to compare OPIOM patients according to their infertility treatments and to evaluate the pregnancy outcomes among these patients.

Methods: A retrospective study of 56 pregnancies in the OPIOM group were compared to 134 control pregnancies with a BMI >35 kg/m^2 was performed.

Results: OPIOM patients were older ($p<0.001$), more often nulliparous ($p<0.001$), had a lower BMI ($p=0.04$) but had more often a history of bariatric surgery. They had more comorbidities ($p<0.001$), more obstetrical history ($p=0.03$) and more ART pregnancies ($p<0.001$). There were not more maternal risks and they gained less weight ($p=0.01$). For neonates, there were fewer live births ($p<0.01$), more preterm birth ($p=0.03$), more hospital admissions ($p<0.01$) and more early onset neonatal infection ($p=0.048$) but no more small or large for gestational age, no more malformations at birth, and no more other studied risks. Once we limited this analysis to singleton pregnancies, these 4 criteria that showed significant differences became comparable.

Among patients managed by OPIOM, 34.9% had at least one pregnancy and 64.4% of pregnancies went beyond 14WG. The probability of having a baby in a cradle was 33.6%.

Conclusions: There were no more maternal risks in patients who were managed by OPIOM. The higher neonatal risks we observed disappeared once we restricted our analysis to singleton pregnancies, underlying the importance of limiting multiple pregnancies in infertile patients with maternal obesity.

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Linzagolix reduces uterine and fibroid volume

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Introduction and aims of the study: Linzagolix, a new oral GnRH antagonist, was assessed in women with heavy menstrual bleeding (HMB) due to uterine fibroids in two placebo-controlled Phase 3 trials, PRIMROSE 1 and 2. The effect on uterine volume (UV) and fibroid volume (FV) was assessed as secondary endpoints.

Methods: 1012 women with at least one fibroid > 2cm diameter and HMB were treated with LGX100mg or 200mg, ± add-back-therapy (ABT;E2:1mg/NETA:0.5mg) for up to 52-weeks. UV and FV was assessed using transvaginal ultrasound. Change from baseline was analysed using a mixed model with repeated measures. We present Week-24 data.

Results and/or discussion: Median (Q1;Q3) baseline UV was 241cm^3 (160;396) and FV was 53cm^3 (22;127).

At 24-weeks, marked reductions of 39% for UV and 48% for FV were observed for the 200mg group (difference to placebo $p<0.001$).

Reductions of 7% to 16% of UV were observed for the other linzagolix arms with mean (95%CI) ratio to baseline being 0.84 (0.78;0.90; difference to placebo $p<0.001$), 0.93 (0.86;1.00; difference to placebo $p=0.132$) and 0.85 (0.79;0.91; difference to placebo $p<0.001$) for the 100mg, 100mg + ABTand 200mg + ABT, respectively, compared to 1.01 (0.94;1.08) for placebo.

Similarly, reductions of 15% to 25% of FV were observed with the mean (95%CI) ratio to baseline being 0.75 (0.65;0.87; difference to placebo $p=0.012$), 0.85 (0.73;0.98; difference to placebo $p=0.186$) and 0.78 (0.67;0.90; difference to placebo $p=0.028$) for the 100mg, 100mg + ABT and 200mg + ABT, respectively, compared to 0.97 (0.84;1.12) for placebo. Linzagolix was well tolerated.

Conclusions: Reductions in uterine and fibroid volume were observed with linzagolix. This reduction is most significant with the 200mg without ABT dose, suggesting that linzagolix has potential disease modifying properties. The volume reduction may be relevant in delaying, avoiding or simplifying surgical intervention.

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Trends in cbme for postgraduate gynaecology and obstetrics education: lessons learned over the past 20 years

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Introduction and aims of the study: Since the introduction of competency based medical education (CBME), we had nearly 20 years of experience with CBME in the gynaecology and obstetrics postgraduate curriculum. CBME as a whole is developing and adjusting to the present-day. Worldwide CBME is used and implemented increasingly in postgraduate medical education. Over the past years, critical views have been shared on CBME and its practical execution. There is a need for a developmental perspective, to gain insight into trends. The aim of this study is to learn from the past in order to continue developing in the future.

Methods: We performed a case study with the Dutch gynaecology and obstetrics curricula over the past 20 years. We used a template analysis to analyse the curricula.

Results: We analysed 3 consecutive curricula. Over time, changes in CBME were seen in assessment, the effectuation of CBME and a time-based vs competency based concept. Assessment changed from a more summative, to a more formative style. The effectuation of CBME included the CanMeds as a framework and addressed the content of the curriculum in the form of entrustable professional activities (EPAs). The EPAs developed alongside societal changes. The curricula tried to achieve a competency-based concept instead of a time-based concept. Other change domains were the role of personal development of postgraduates, supervision and implementation plans. Development of the curricula was mainly due to changes in society, healthcare systems and educational insights.

Conclusions: The Dutch curriculum has gained structure and more educational foundation since the implementation of CBME. The effectuation of CBME has developed over time and should not be perceived as a rigid concept.

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Factors affecting blood loss during hysteroscopy due to cesarean scar pregnancy

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Introduction and objectives: The combined therapy of cesarean scar pregnancy (CSP), implanted within a dehiscent scar ("niche"), with the use of intra-amniotic and/or intravenous methotrexate (MTX), followed by hysteroscopic removal of products of conception, is effectively conducted at our center. Nevertheless, cases of intraoperative hemorrhage are difficult to predict. Since the prevention of excessive bleeding is critical to optimizing patient care, a study was planned to assess the factors affecting the severity of intraoperative bleeding.

Methods: A retrospective tertiary-center observational study included women undergoing combined CSP treatment, preceded by the consent of the Bioethics Committee for termination of pregnancy. Spearman's correlation analysis and the Mann-Whitney U test of differences were performed to check whether blood loss was related to women's characteristics.

Results: The study involved 40 women aged 29-41 years, with a gestational age of 6-12 weeks. Significant blood loss, defined as a decrease in hemoglobin (Hb) >2g/dl on the postoperative day 1, was found in 15/40 (37.5%), estimated blood loss >500 ml in 8/40 (20%), and the need for packed red blood cells transfusion in 9/40 (22.5%) women. There was no correlation between gestational age ($rS=-0.03$, $p=0.64$), number of cesarean sections ($rS=-0.14$, $p=0.37$), BMI ($rS<0.01$, $p=0.99$), day of surgery after MTX administration ($rS=-0.12$, $p=0.46$), positive fetal heartbeat before MTX administration ($p=0.11$), dynamics of B-human chorionic gonadotropin concentrations (increasing/decreasing) before MTX administration ($p=0.81$), and the decrease in Hb concentration on the postoperative day 1. Similarly, there was no significant correlation between the above variables and the volume of estimated intraoperative blood loss or the need for packed red blood cells transfusion.

Conclusions: The results do not indicate significant predisposing factors for increased bleeding. A study with a larger sample could provide new insights.

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Influence of probiotics on the nlrp3 – inflammasomme level in women with endometriosis associated with infertility in complex preparation for assisted reproductive technologies

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Introduction: Endometriosis is one of the most urgent problems in modern gynecology. Since this disease is observed in almost every third woman and there is a tendency to increase the frequency of cases, endometriosis remains a "subject" of special interest not only for scientists, but also for practicing doctors.

The aim was to study influence of probiotics on endometriosis in infertile women in complex preparation to assisted reproductive technologies on the background expression Nlrp3-inflammasomma.

Methods: We examined 30 women who were divided into the following groups: control group consisted of 10 women with tubal infertility due to an inflammatory process in the anamnesis, in whom, as a result of a complex clinical and laboratory examination, no other diseases were detected and in terms of their health they could be equated with practically healthy women (age from 21 to 42 years, the average age was 29.75 years) and who did not take probiotic "Femina probiz" The main group consists from 20 women with external genital endometriosis were included in assisted reproductive technologies. Patients from main group took proboitic "Femina Probiz" produced Unic Biotech Ltd, India1 tablet twice a day with 10×10^9 Lactobacterii during 1 month in complex preparation (treatment) before assisted reproductive technologies. The indices of Nlrp3 –inflammasomme determined before and after preparation. The study was perfomed in Bukovinian State Medical University and Centre of Reproductive Medicine.

Results and discussion: The mean age of women in control group (who did not take probiotic "Femina probiz "- $29,75\pm7,09$ years) and in main group (who took probiotic "Femina probiz") $30,65\pm2,04$ ($p>0,05$).

Expression of Nlrp-3 inflammasomme level: Expression of Nlrp-3 inflammasomme increased in patients before preparation more than 34 times compare with patients after preparation accordingly.

Consequently, after using probiotic, the increased level of Nlrp3-inflammasomme sharply decreases, indicating the effectiveness and the possibility of use in the program for assisted reproductive technologies preparation.

Conclusion: The very high expression of Nlrp-3 inflammasomma depicts that pathogenesis of endometriosis closely related with inflammation.

Using of probiotic in complex preparation before assisted reproductive technologies significantly improve well-being of patients and sharply reduce expression of Nlrp-3 inflammasomma.

We recommend our preparation with probiotic in practice.

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Value of ultrasound examination using #enzian score in patients with deep endometriosis - a pilot test

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Introduction: Deep endometriosis (DE) is an endometriosis phenotype, which often causes severe pain, bowel and fertility problems, resulting in reduced quality of life. Median time from onset of symptoms to the diagnosis is often more than 10 years. It is mainly due to location of the disease, which are difficult to recognize and detect. Successful treatment of this entity encompasses radical removal of all lesions. Thus,

it is a need to select the most efficient method for precise mapping the disease.

Aim: Assessment of a value of an endometriosis algorithm' ultrasound examination performed by an expert in regard to intraoperative stage of the disease.

Methodology: 14 consecutive patients by whom a preliminary diagnosis of deep endometriosis was set up based on clinical symptoms and physical examination were enrolled into study. Everyone had an ultrasound examination assessed with #ENZIAN score (2021). Laparoscopic procedure of radical removal of deep endometriosis lesions was performed by every patient. The results of an ultrasound assessment of the extent of the disease and its advancement were then compared with the intraoperative assessment using the same score. For the comparative analysis, software written for the purpose of the study for the parametric test was used.

Results

	Both (-) %	Surgery (+) US (-) %	Surgery (-) US (+) %	Both (+) %	P value
Peritoneum	14	50	0	36	0.023
Left ovary	29	21	0	50	0.25
Right ovary	57	14	0	29	0.48
Left tube	14	0	36	50	0.074
Right tube	29	0	21	50	0.25
A	7	22	7	64	0.62
Left B	14	7	0	79	1
Right B	14	7	0	79	1
C	22	14	0	64	0.48

Discussion: The analysis showed a statistically significant difference in the diagnosis of peritoneal lesions (50% inconsistent). In other locations, the agreement of the results ranges from 64% to 93%. However, this tendency is stronger for the assessment of lesions located in the posterior compartment (ABC).

Conclusions: Pre-operative endometriosis algorithm' ultrasound assessment performed by an expert has a very high accuracy for location and high accuracy for extent of deep lesions. Thus, it can be assumed as an effective tool for mapping lesions for radical resection of deep endometriosis.

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Bone marrow toxicities in ovarian cancer patients treated with parp inhibitors

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Introduction and aim of the study: PARP inhibitors (olaparib, niraparib) significantly improve the prognosis of patients with ovarian cancer. We aimed to analyze the hematological side effects of the patients treated with olaparib and niraparib.

Methods: The complete blood counts of 55 patients (23 in the niraparib group and 32 in the olaparib group) were collected during follow-up visits. The anemia was defined as hemoglobin (Hb) <7.5 mmol/l and the thrombocytopenia as platelets (PLT) $<$ 150 k/μL. The epidemiological data were recorded, including age, weight, and BMI.

Results: Thrombocytopenia occurred in 19 (82.61 %) patients in the niraparib and 9 (28.13 %) in the olaparib group. There were two patients with grade 3 and three with grade 4 thrombocytopenia during niraparib treatment. We observed the lowest PLT level after three weeks of treatment with niraparib (median PLT 148, range 2-234 k/μL). Anemia developed in 16 (50 %) patients in the niraparib and 29 (90.63%) in the olaparib group. There was one patient with grade 3 and five patients with grade 4 anemia during olaparib treatment. We recorded the lowest median hemoglobin after two months of niraparib therapy (7.21, range 6.14-9.30 mmol/l) and after three months of olaparib treatment (6.70, range 2.70-8.20 mmol/l). In the niraparib group, the platelets decreased more in patients with higher initial PLT levels (rho = -0.49, $p = 0.017$). In the olaparib group, the hemoglobin level declined more in patients with higher BMI (rho = -0.38, $p = 0.047$).

Conclusions: Niraparib treatment contributes mainly to thrombocytopenia, whereas olaparib often induces anemia. Hematological complications in the niraparib group emerge within the first weeks and therefore require weekly follow-up visits. During niraparib treatment, PLT decreased rapidly in patients with higher initial PLT count. In olaparib-treated patients, hemoglobin declined more in the group with higher BMI.

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Clinical efficacy of low-intensity focused ultrasound to treat primary dysmenorrhea: A randomized clinical trial

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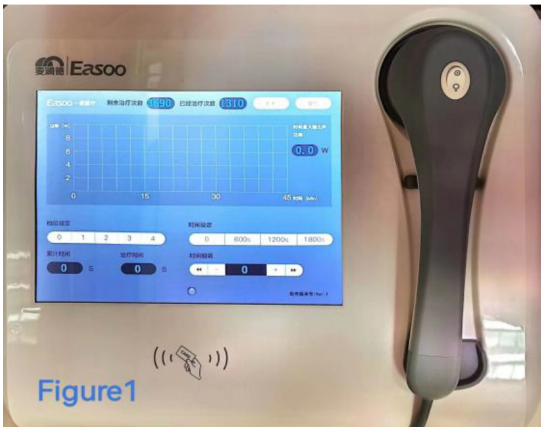
Objective: This study aimed to investigate the effect of low-intensity focused ultrasound on primary dysmenorrhea.

Methods: 80 patients with primary dysmenorrhea were selected for the study. They were selected as the research objects and randomly divided into the observation group and the control group, Patients in the observation group were treated with low-intensity focused ultrasound, while patients in the control group were treated with oral ibuprofen.

Results: After 3 menstrual cycles of treatment, CMSS, VAS, and serological index PGF2α decreased in the 1st, 2nd, and 3rd cycles and PGE2 increased in the 1st, 2nd, and 3rd cycles in both the observation and control groups, and the changes were more significant in the observation group than in the control group ($P < 0.05$). By studying the relationship between disease duration and treatment effect, each year increase in disease duration decreased the treatment effect (OR = 0.29). and by studying the relationship between treatment modality and treatment effect, low-intensity focused ultrasound increased the treatment effect compared to oral ibuprofen (OR = 3.75). The cure rate and total effective rate were 32.50% and 87.50% in the observation group and 10.00% and 72.50% in the control group.



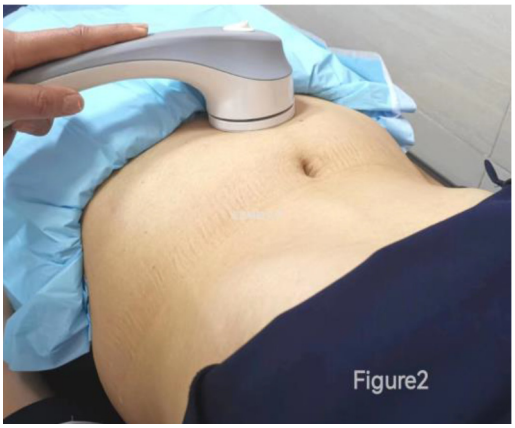


Table 1. Comparison of data before and after treatment between the two groups

Data		Observation group(n = 40)	Control group(n = 40)	$t/U/\chi^2$	*P*
Age/y		26(2)	26(2)	852.00[b]	0.611
Height/cm		162(7)	162(4)	83800[b]	0.713
Weight/kg		58(6)	57(3)	611.00[b]	0.068
BMI		22.10 ± 1.88	21.37 ± 1.48	1.93[a]	0.057
Course of disease/y		7(2)	7(3)	852.50[b]	0.351
Before CMSS treatment		47(4.00)	46(3.00)	704.00[b]	0.351
Cycle 1 after CMSS treatment		40.00(4.00)	43.00(3.00)	1231.00[b]	< 0.001
Cycle 2 after CMSS treatment		35.50(5.00)	41.00(3.00)	1432.00[b]	< 0.001
Cycle 3 after CMSS treatment		30.00(3.00)	39.00(3.00)	1514.00[b]	< 0.001
Before VAS treatment		5(0)	5(0)	727.00[b]	0.314
Cycle 1 after VAS treatment		4.50(1.00)	5(0.00)	1059.00[b]	0.005
Cycle 2 after VAS treatment		4.00(1.00)	5(1.00)	1354.50[b]	< 0.001
Cycle 3 after VAS treatment		3.00(2.00)	5(0.00)	1404.50[b]	< 0.001
Before PGF2α treatment(pg/ml)		189.38 ± 12.80	188.45 ± 14.09	0.31[a]	0.759
After PGF2α treatment(pg/ml)		96(10)	157.5(15.5)	1594.50[b]	< 0.001
Before PGE2 treatment(pg/ml)		359(6.50)	361(4.00)	613.50[b]	0.072
After PGE2 treatment(pg/ml)		425(10.5)	402.73 ± 8.77	38.50[b]	< 0.001
Treatment effect	cures	13(32.50%)	4(10.00%)	551.50[b]	0.013
	Significantly effective	14(35.00%)	15(37.50%)		
	Improvement	8(20.00%)	10(25.0%)		
	Ineffective	5(12.50%)	11(27.50%)		

Note: [a] is t-test; [b]is Mann-Whitney U test.Table 2 Comparison of CMSS and VAS in the two groups at 3 treatment cycles

Assessment	Group	Before treatment (mean rank)	Cycle 1 after treatment (mean rank)	Cycle 2 after treatment(mean rank)	Cycle 3 after treatment (mean rank)	χ^2	*P*
CMSS	Observation group	4.00	3.00	2.00	1.00	120.00[c]	< 0.001
	Control group	4.00	2.99	2.00	1.01	119.405[c]	< 0.001
VAS	Observation group	3.84	3.08	1.96	1.13	110.35[c]	< 0.001
	Control group	3.51	2.80	2.30	1.39	73.862[c]	< 0.001

Note: [c] is the Friedman test.Table 3 Comparison between the two groups before and after treatment with PGF2α and PGE2

Index	Group	Before treatment (pg/ml)	After treatment(pg/ml)	*t*/z	*P*

PGF2α	Observation group	189.38 ± 12.80	96.00 (10.00)	-5.513[d]	< 0.001
	Control group	188.45 ± 14.09	157.50 (15.50)	-5.513[d]	< 0.001
PGE2	Observation group	359.00(6.50)	425.00 (10.5)	-5.513[d]	< 0.001
	Control group	361.00(4.00)	402.73 ± 8.77	-5.513[d]	< 0.001

Note: [d] is a paired sample wilcoxon test.Table 4 Treatment effect in the two groups

Dependent variable	Option	Frequency	Percentage
Treatment effect	1 Cured	17	21.25%
	2 significantly effective	29	36.25%
	3 Improvement	18	20.0%
	4 Ineffective	16	22.5%
	Total	80	100.0%

The results of the likelihood ratio chi-square test of the model showed 67.21, significant at $p < 0.001$, showing significance at the level and thus the model was valid.Table 5 ordered logistic regression Comparison in the two groups

Relationship between treatment effects and variables		Regression coefficient	Standard error	Wald	Significance	OR value	95% Confidence interval	
							lower limit	upper limit
Threshold	[Treatment effect = 1]	-9.928	1.582	39.398	0.000		-13.028	-6.828
	[Treatment effect = 2]	-8.167	1.451	31.687	0.000		-11.010	-5.323
	[Treatment effect = 3]	-5.447	1.253	18.882	0.000		-7.903	-2.990
Location	Course of disease (years)	-1.240	.208	35.474	0.000	0.29	-1.648	-.832
	[treatment method = ILFU]	1.321	.468	7.973	0.005	3.75	0.404	2.239
	[treatment method = ibuprofen]	0[e]	.	.	0		.	.

Note: [e] This parameter is redundant, so it is set to 0.

Conclusion: Low-intensity focused ultrasound can effectively treat symptoms and change serological indicators in patients with primary dysmenorrhea without side effects, and can be promoted.

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To examine or not to examine, this is not the question: a diagnostic exclusion of 32-year-old virgo intacta presented with advanced non-hpv related cervical cancer and ovarian metastases

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Introduction and aims of the study: A 32-year-old woman with schizophrenia and obesity presented with heavy vaginal bleeding and lower abdominal pain. She denied any sexual activity and her progressively heavy menstruations were falsely associated with lamotrigine use. Over 3 years she started having a vaginal discharge with a strong odor. Due to an intact hymen, she wasn't examined vaginally.

Methods: MRI showed extensive pathological mass of the uterus, abdominal lymphadenopathy and enlarged ovaries. Embolisation of uterine arteries was performed. Vaginal speculum examination with cervical biopsy under anesthesia revealed a 6 cm diameter cervical tumor, disintegrating to the touch, and a foul-smelling discharge. Histopathology showed small cell neuroendocrine carcinoma (SCNC), HPV-negative immunoprofile (FIGO stage IIIC2). Awaiting histopathology at home she returned due to subileus. Imaging studies showed solid mass in mid-abdomen and non-distinguishable borders of ovaries with fluid around. Despite treatment for acute kidney injury and tumor lysis syndrome with an intent to launch chemotherapy, the patient discharged at her own request. She died at home a few days later.

Discussion: SCNC of the uterine cervix comprises less than 1% of cervical cancers and can not be distinguished from other types macroscopically or radiologically. Often the ectocervix appears intact on the surface and is undermined by the tumor ("barrel-shaped" cervix). It manifests at a young age at FIGO stage III/IV. 50% of cases are unrelated to high-risk HPV infection and are unsuspected in sexually inactive women. Relapses are frequent and often lethal.

Conclusions: Currently, patients who have never had sexual intercourse are still excluded from routine cervical cancer screening. Speculum examination or imaging study like transrectal US or CT/MRI of abdomen should be performed after appearance of symptoms unspecific for sexually inactive females, like odorous vaginal discharge and heavy bleeding in case of our patient. Advanced cervical cancer should be treated as a general medical emergency.

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The use of capacitive and resistive energy transfer in postpartum perineal pain management

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Introduction: First- and second-degree perineal tears occur in 22.8% of women giving birth, while third- and fourth-degree tears in 1.8-5.9% of cases. During the first day after a vaginal delivery, perineal pain occurs in more than 95% of women who have had an episiotomy, or first- or second-degree perineal tear.

Aims: To assess the effect of capacitive and resistive energy transfer (TECAR) on the perineal pain level in the first two days after vaginal delivery with perineal trauma.

Materials and methods: The randomized, double-blind study included history, transvaginal physiotherapeutic examination, and interventions with TECAR on the first and second day after delivery. Subjects were randomized into the study and control (sham) group. The pain level at rest and while walking were measured using the Numerical Rating Scale (NRS) at baseline and after the first and second interventions. Data were analyzed as a distribution of the differences between measurements within and between the groups.

Results: The study included 121 women (60 primiparas and 61 multiparous) with a mean age 30.7 ± 4.2 years and a median BMI 26.1kg/m^2 (24.1; 28.9). In the study group, significant differences between baseline and first and second interventions for pain at rest and pain while walking were observed (p = 0.00), while in the control group, only between baseline and the second intervention (p = 0.002). In a comparison between groups, statistically significant results were obtained for the distribution of differences between the baseline and after the second TECAR intervention for the pain at rest parameter: median difference -2(-3;-1) (p = 0.045) and for the distribution of differences before and after the first intervention for the pain while walking: median difference -0.5(-2;0) (p < 0.01).

Conclusions: TECAR therapy is a non-invasive method, which might accelerate recovery and can be considered as an adjunct to pain management in the first days after delivery for perineal injuries.

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Adipokines measured in early pregnancy as a predictive factor of gestational diabetes mellitus, insulin requirements and weight change in pregnancy

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Introduction and aims of the study: Gestational diabetes mellitus (GDM) is defined as glucose intolerance first diagnosed during pregnancy. Certain substances produced by adipose tissue, called adipokines, are considered key in the pathogenesis of GDM. The aim of this study was to investigate the relationship between adipokines measured in the first trimester and the occurrence of this complication later in pregnancy.

Methods: In 144 patients adipokines (leptin, adiponectin, resistin, TNF a and Il-6) were measured during the first trimester of pregnancy. Among these patients, 61 cases of GDM were found (in a screening test performed between 24 and 28 weeks of pregnancy) and 83 patients of the control group without GDM. The collected data were analyzed using the descriptive mean ± SD, a p value < 0.05 was considered to reflect statistical significance. Spearman's correlation test was used to define relationships between individual parameters.

Results: At the beginning of pregnancy levels of adipokines were similar in both groups. Contrary to expectations serum leptin levels were detected to be significantly lower (p = 0.02) whereas serum adiponectin/leptin ratio was found to be significantly higher (p = 0.003) in the GDM group compared with the control group. In addition, weight gain during pregnancy was significantly higher in patients without established GDM than in patients with GDM (p < 0.001). In the GDM group, significant negative correlations were evident between: resistin and TNF- α (r = -0,276 p = 0.03), resistin and leptin (r = -0,386 p = 0.002). However, a significant positive correlation was apparent between adiponectin and pregnancy weight change (r = 0,254 p = 0.04).

Conclusions: The results of this study demonstrated higher leptin levels and greater weight gain in non-GDM patients. This contrasts with results of previous studies. Further studies are required to confirm the roles played by adipocytokines in the pathophysiology of GDM-related complications.

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The 17 years of experience in intrauterine myelomeningocele repair in fetal surgery center bytom poland

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Introduction: Myelomeningocele (MMC) is a non-lethal, severe congenital defect of the neural tube.

It occurs at a frequency of 2-6/10000 live births. Postnatal MMC repairs are unsatisfactory due to delay as they are associated with intrauterine development of Chiari malformation type II, fetal ventriculomegaly, progressive hindbrain herniation and loss of motor function in the lower extremities, as well as neurogenic bladder and bowel dysfunction.

Efficacy and validity of intrauterine MMC repair (IUMR) by open fetal surgery (OFS) has been proven and documented by long term and multicenter clinical experience including MOMS trial. Due to possible maternal complications, this method is still being improved. Fetal Surgery Center in Bytom (FSCB), has been conducting IUMR since 2005. Our experience includes interventions of both OFS and hybrid Fetoscopic methods in a total number of over 190 interventions.

Aim: Presentation of the current low-risk protocol (LPR) of the IUMR technique and maternal-fetal results.

Material and methods: The implementation of LPR allows to perform a classic hysterotomy without the use of an automatic uterine stapler and excludes the use of Magnesium sulfate. We analyzed and compared perinatal results of 64 OFS performed with LRP in years 2015 – 2020 at FSCB vs. the retrospective cohort (RC; N = 46) and data

from the Zurich Center for Fetal Diagnosis and Therapy (ZCFDT; N = 40) and the Children's Hospital of Philadelphia (CHOP; N = 100) all using traditional tocolysis and staplers.

Results: The analysis included complications within Clavien-Dindo classification (C-Dc) which developed before the end of 34th week of gestation (GA, gestational age). None of the newborns was delivered before 30 GA. Only 2 women presented grade 3 complications and none presented 4th or 5th grade (C-Dc). The incidence of perinatal death (3.3%) was comparable with RC (4.3%) and CHOP (6.1%).

Conclusion: LRP resulted in a significant reduction of perioperative tocolysis (16.6% in SC vs 62.5% in ZCFDT) and lowers the risk of major perinatal complications.

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Transfer of *bifidobacterium breve* 702258 to from mother to infant: The microbemom randomised controlled trial

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Introduction and aims: The composition of the infant microbiome can have a variety of short- and long-term implications for health. It is unclear if maternal probiotic supplementation in pregnancy can impact infant gut microbiome. The aim of our study was to investigate if maternal supplementation of a formulation of Bifidobacterium breve 702258 from early pregnancy until three months postpartum could transfer to the infant gut.

Methods: This was a double-blinded placebo controlled randomised-controlled trial of B. breve 702258 (minimum $1x10^9$ colony forming units) or placebo taken orally from 16-weeks' gestation until three-months postpartum in healthy pregnant women. The primary outcome was the presence of the supplemented strain in infant stool up to 3 months of life. Stool samples were collected from the infants at 1-week, 1-month, or 3-months postpartum, with 120 individual infants' stool samples required to have 80% power to detect a difference in strain transfer between intervention and control at a significance level of 0.05. Rates of detection were compared using Fishers exact test.

Results: 160 pregnant women with average age 33.6 (3.9) years, mean BMI of 24.3 (22.5, 26.5) kg/m^2 and 43% with nulliparity (n = 58) were recruited from September 2016 to July 2019. Neonatal stool samples were obtained from 135 infants (65 in intervention and 70 in control). The presence of the supplemented strain was detected through at least two methods (PCR and culture) in two infants in the intervention group (n = 2/65, 3.1%) and none in the control group (n = 0, 0%), $p = 0.230$.

Conclusions: Direct strain transfer from mothers to infants of B. breve 772058 occurred, albeit infrequently. This finding highlights potential for maternal supplementation to influence the infant gut but more research is needed to determine optimal interventions and mechanisms.

Trial registration number: ISRCTN53023014

Keywords: Obstetrics; microbiome; randomised controlled trial; nutritional sciences.

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Obstetrics and gynaecology trainees [StQuote] perspectives on training in termination of pregnancy across Europe

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Introduction and aims of the study: The purpose of this study is to evaluate the views and perspectives of Obstetrics and Gynaecology (O&G) trainees on termination of pregnancy (ToP) training in Europe.

Methods: This study was a cross-sectional survey, using an online questionnaire regarding the national legislation, personal beliefs, and training in the provision of ToP. We aimed to survey the national programs in 35 member countries of the European Network of Trainees in Obstetrics and Gynaecology (ENTOG). Taking part in the survey was voluntary and anonymous. The questionnaire was shared on ENTOG's website, social media, newsletter, and through the ENTOG national representatives.

Results: 77 responses were received from 63.8% (n = 23) of ENTOG member countries. 50.6% (n = 39) of the respondents had completed four or more years of training.

Different policies governed the accessibility of ToP services despite being offered in all the respondents' countries. Where ToP is available on request, availability is either unrestricted (37.7%, n = 29) or is subjected to mandatory counselling only (22.1%, n = 17) or had an additional waiting period (33.8%,n = 26).

Respondents believed that the decision for ToP should lie solely with the patient in the first trimester (83.1%, n = 64) and at any stage of pregnancy (46.8%,n = 36) regardless of the reason. 75.3% (n = 58) believed that ToP should be provided for free regardless of the reason.

92.2% (n = 71) of respondents agreed on the importance of training in ToP. However, its inclusion in the training curriculum is mandatory for only 45.5% (n = 35). Where there is training, 75.0% (n = 42) were satisfied with the quality of their training and 78.6% (n = 44) felt adequately trained to provide ToP.

Conclusions: Trainees found training in the ToP important for their future medical practice. There is an urgent unmet need to train the next generation of O&G trainees in ToP and to safeguard patients' rights to reproductive healthcare across Europe.

Keywords: Abortion; Termination of pregnancy; ENTOG; Europe; Gynaecology; Training.

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Intrapregnancy uterine fundus rupture - case report

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Introduction: Intrapregnancy uterine rupture (its incidence 0.035-1%) is an obstetric complication threatening the life of the mother and fetus.

Methods: Relaparotomy. Cesarean section. Treatment of a uterine fundus rupture and spleen capsule rupture. Removal of the part of the omentum.

Case presentation: A 36-year-old woman, at 36 weeks gestation, was admitted to the hospital due to severe abdominal pain, vomiting, and significant weakness. The examination revealed pale skin, positive abdominal tenderness, high uterine tone, without regular uterine contractions. The vaginal part of the cervix was closed. The sinusoidal pattern was observed on the cardiotocograph.

Medical history: cesarean section (01.2019), laparoscopic removal of the left ovarian endometrial cyst, and pedunculated leiomyoma from the uterine fundus (09.2020).

Transabdominal ultrasonography showed a live single intrauterine fetus, partial placental abruption on one-third from the anterior uterine wall and bleeding into the abdominal cavity. Emergency cesarean section was performed.

Scaring of the uterine muscle after previous cesarean section was visible in the abdominal cavity. A live newborn was delivered in average general condition.

An extensive uterine rupture was found, involving the fundus of the uterus and its adhesions within the omentum. The uterine rupture was sutured with single sutures. Part of the omentum, haemorrhaging from the damaged vessels, was removed. Bleeding perihilar rupture of the splenic capsule was treated with two hemostatic dressings (Tachosil®). Blood loss was estimated at 2000-2500ml. The patient received transfusion of 2 units RBC concentrate and 2 units FFP. Patient's circulation was supported with norepinephrine (4mg/50ml) 5ml/h, her parameters were stable with BP 100/70mmHg and HR 60-70/min. On the 7th day after surgery, the patient recovered and was discharged from the hospital with the newborn.

Conclusions: It is vital to inform women to maintain an interval between uterine surgery and planned pregnancy.

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Incisional small bowel strangulation after cesarean section

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Introduction and Aims of the study: Every surgical procedure has the possible risk for complications, caesarean section (CS) is no exception. We present a case of rare CS complication that led to re-laparotomy.

Methods **case presentation**: A 25-year-old patient came to our hospital with twin pregnancy for labour induction. An urgent CS was performed through Pfannenstiel incision due to labour dystocia. Uterus was sutured using single layer continuous suture. Visceral peritoneum was sutured separately using continuous suture. Parietal peritoneum was left unsutured while rectus muscles were re-approximated with three interrupted stitches. On the third postoperative day patient complained about diffuse, spastic abdominal pain and vomiting. Abdominal CT scan revealed an infraumbilical abdominal wall defect with an eventration containing distal loops of ileum, occupying area of 12.3x6.9 cm. During urgent re-laparotomy, after disassembling aponeurotic suture, small bowel loops were noted to be strangulated in approximately 2 cm defect which had been left open when re-approximating abdominal muscles with interrupted sutures.

Discussion: Re-laparotomy after CS in early postoperative period is extremely rare. According to guidelines, visceral, parietal peritoneum and rectus muscles should not be sutured as this reduces operating time, the need for postoperative analgesia and is not associated with more adhesion formation. However, there are conflicting results whether re-approximation of rectus muscles has a positive effect on the prevention of diastasis recti. In our case rectus muscles were closed separately from other layers with interrupted stitches while parietal peritoneum was left unsutured. It led to intestinal protrusion and strangulation in between two separate muscular sutures.

Conclusions: Although there are discussions about CS technique, most guidelines recommend to not re-approximate rectus muscle. This case stands out as an example of a complication which most likely could have been avoided if rectus muscles were left unsutured.

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Case of successful laparoscopic uterine niche repair

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Introduction and aims of the study: Due to the increasing incidence of Caesarean Section (CS) worldwide, uterine scar niche presents a rising problem. It can cause chronic pelvic pain, dysmenorrhea, dyspareunia and abnormal uterine bleeding. Possible complications are caesarean scar ectopic pregnancy, placenta previa, abnormal placenta attachment and uterine rupture, all of which are associated with major maternal morbidity and mortality. We report a case of uterine scar niche laparoscopic repair.

Methods: This case concerns a 23-year-old patient with 3 previous CS, the last 1,5 years ago. She complained of heavy menstrual bleeding and prolonged spotting before and after menstruation, lasting up to 2 weeks. Transvaginal sonography showed a V-shaped anterior uterine wall defect in the caesarean scar region with residual myometrial thickness of 2,6 mm. Endometrium penetrated into the scar defect.

The patient was prescribed combined oral contraception to minimise bleedings and was referred to laparoscopic uterine niche correction in 2 months.

Uterine scar region was excised laparoscopically using ultrasound knife and monopolar. The wound was sutured in 2 layers: first layer with single resorbable sutures, second with running V-loc suture. After that wound was covered with an absorbable adhesion barrier (Interceed).

Results: Follow-up period continued for 8 months. 4 months after the operation the patient had regular 5-day-long menstruations with minimal bleeding. Transvaginal sonography showed uniform anterior uterine wall with myometrial thickness of 6,6 mm and thin uniform endometrium 4,8 mm.

Conclusion: Such long-term complications of CS as uterine scar niche can cause major problems for young fertile women. If a patient has complaints and/or further reproductive plans, niche can be treated laparoscopically or hysteroscopically. To prevent niche formation, CS percentage should be well-controlled and kept at minimal level. Correct CS surgical technique is also extremely important.

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Brain tumors in pregnancy, symptoms, diagnosis and our cases

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Primary brain tumors during pregnancy are rare. Clinical symptoms are non specific for example cephalea, nausea, vomiting or epileptic seizures, some symptoms can be easily confused with pregnancy symptoms or complications such as vomiting in early pregnancy or eclampsia. It is obligatory to say that symptoms of brain tumors are the same in both pregnant and non pregnant patients. The diagnosis is established in cooperation between obstetrician, neurologists and radiologists. Treatment of brain tumors in pregnancy is a matter of a multidisciplinary team, which should determine the risks and benefits of treatment for both mother and fetus. In such cases, the procedure is very individual according to the clinical condition of the patient, the malignant nature of the tumor and the stage of pregnancy. We will present our two recent cases of pregnant patients with brain tumors, one with meningioma, which make up about one-third of all intracranial tumors, and one with glioblastoma, which is the most common malignant brain tumor.

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Fetal congenital oral masses – case report of gingival and anterior midline lingual mass

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Introduction: Congenital oral pathological lesions of the fetus are rare conditions. The presentation focuses on the two chosen cases with good prognosis. The aim of the presented clinical cases is to highlight the importance of early prenatal diagnosis and adequate preparation for the labour and postnatal treatment. We describe two cases of congenital oral masses: gingival tumor of the mouth and anterior midline lingual cyst, both diagnosed prenatally.

Methods: In order to evaluate oral masses prenatally in the two presented cases, the ultrasound examination was the main tool. Both of the patients have also had a MRI prenatally.

Results: Anterior midline lingual cyst as well as the gingival tumor were first diagnosed in 34th week of pregnancy. We regularly monitored the changes via ultrasound examination to evaluate the possible progression. In each case newborns were able to breath by themselves straight after being born. In both of the cases the surgical assistance was present. The gingival mass was removed one day after birth in general anesthesia. The anterior midline lingual cyst was punctured by pediatric surgeon right after delivery, but finally the excision of the lesion was performed.

Conclusion: Prenatal diagnosis of oral masses is extremally relevant, because it enables us to be well prepared for the labour. Depending on the type and extent of oral pathological lesions, the adequate management should be planned. Often not only the neonatologists, but also the surgeons must be involved in immediate postpartum care, what can prevent airway mechanical obstruction due to urgent surgical intervention.

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DIC syndrome manifestation and findings during childbirth

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Introduction: Disseminated intravascular coagulation (DIC) is a pathologic disruption of the finely balanced process of haemostasis. It is characterized by systemic activation of blood coagulation. Pregnancy-associated disseminated intravascular coagulation (DIC) accounts for approximately 1 to 5 percent of all cases of DIC in resource-abundant countries; this proportion appears to be higher in resource-limited countries.

The aim of the study was to compare the clinical presentation, management and outcome of women who developed DIC syndrome during childbirth and in the postpartum period.

Methods, results: We report two cases of pregnancy related DIC with different aetiology, management and outcome.

A 28-years old female was in 38th week of her first pregnancy, when she was admitted to the hospital due to preeclampsia and gestational diabetes for labour induction. After 2nd category caesarean section due to dysfunctional labour, she developed hypoglycaemia, acute abdominal pain and collapse due to fulminant HELLP syndrome and subcapsular liver haematoma. After successful CPR she was referred to university hospital for treatment, where maternal mortality occurred.

A 35-years old female in 39th week of her third pregnancy, complained of pulling low abdominal pains and decreased fetal movements. Antenatal fetal death due to occult central placental abruption and DIC were diagnosed. Caesarean hysterectomy after DIC correction was done with the blood loss of 4 litres. The patient was discharged from the hospital on the 7th postpartum day.

Discussion: DIC in pregnancy in a potentially lethal condition and its management and outcome depends on aetiology and management of the condition.

Conclusion: DIC could be developed by low-risk patient. For the successful treatment it is necessary to diagnose early and to correct dysfunctional coagulation before the surgery. Earlier delivery in mother with preeclampsia could improve the outcome.

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A case of enlarged adrenal glands in fetus as a prenatal marker of congenital adrenal hyperplasia (CAH)

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Objective: To report of a case of enlarged adrenal glands in fetus as a prenatal marker of congenital adrenal hyperplasia.

Methods: A 35-year-old, P2, with previous normal pregnancy and outcome, without a history of CAH in family, had the first trimester combined screening because of her age and a slight fetal oedema observed at 10 weeks of pregnancy. The result showed a low risk of trisomy 21,18 and 13. The patient decided to do the NIPT test due to her anxiety, which also showed a low risk of chromosomal abnormalities and detected the gender of the fetus: female: karyotype 46, XX. In the second trimester fetal ultrasound no abnormalities were found, the gender was confirmed. In the third trimester fetal ultrasound at 33 weeks of pregnancy the bilateral enlargement of adrenal glands was observed for the first time. The adrenal glands appeared enlarged in ultrasound examination also at 36 weeks of pregnancy. The external genitalia in the third trimester were not well visible because of fetal position. The patient was offered the amniocentesis to investigate if the fetus was affected with CAH, but she declined. The delivery was planned in the tertiary perinatal center.

Results: A female newborn was born at 39 + 6 weeks of pregnancy with stage 3 on the Prader scale and bilateral enlarged adrenal glands in the postnatal ultrasound examination. Decisively CAH was confirmed with genetic testing: karyotype 46,XX and CYP21A2 gene mutation.

Conclusions: The presented case shows that enlarged adrenal glands can be a prenatal marker of CAH. In our opinion attention should be paid on the adrenal region, because it can detect fetuses affected by CAH and help to plan postnatal care before the newborn screening is performed.

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Successful management of a pregnancy complicated by ollier disease and coagulation factors deficiency – A rare case report

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Introduction: Ollier disease (OD) is a rare, non-hereditary bone disease characterized by multiple enchondromas with a predilection for the appendicular skeleton or pelvis. Its prevalence is estimated at 1:100,000 people. Patients with OD have a 20-53% increased risk of malignant transformation into chondrosarcoma, visceral, hematologic or gonadal-related malignancies. This is the first case described in Poland and the third in the world of a pregnant patient with Ollier disease.

Aim of the study: To describe a rare clinical case and highlight the obstetric considerations.

Methods: A case report study.

Results: A 31-year-old primigravida at five weeks of gestation, diagnosed with OD at the age of 6, after fifteen orthopaedic surgeries, was admitted to the department because of vaginal bleeding. Based on the laboratory results, a deficiency of coagulation factors VII and X was diagnosed. There were no previous symptoms of bleeding diathesis. The patient received multispecialty care involving specialists in perinatology, genetics, orthopaedics, haematology, and neonatology. Close oncological surveillance was ensured. Genetic tests of the patient and prenatal diagnosis revealed no abnormalities. The coagulation factors activity was gradually increasing, and there was no recurrence of vaginal bleeding. Serial ultrasound assessments confirmed proper fetal growth and anatomy. At 32 weeks of gestation, prenatal steroid therapy was implemented due to the threatening preterm delivery. An urgent cesarean section at 35 weeks of gestation was performed because of abnormal CTG records and signs of increasing intra-abdominal pressure. A healthy male newborn weighing 2860 g with Apgar score of 8/8/8 was born. There was no excessive bleeding during the surgery and the puerperium.

Conclusion: When extremely rare conditions like OD are present, the care of the pregnant woman requires the setting up an individualized diagnostic and therapeutic plan with a multi-disciplinary approach.

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Hysterectomy by vaginal natural orifice transluminal endoscopic surgery (VNOTES): A video with step-by-step description

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Introduction and aims of the study: Natural orifice transluminal endoscopic surgery is a minimally invasive technique, which uses the natural orifices of the human body as a channel for surgical work. This technique was initially introduced in 2004 and popularity in the world of gynaecology has been increasing. Several retrospective studies and reviews have compared the vaginal NOTES with the laparoscopic technique and the results have been promising, with a shorter surgical time, shorter hospital stay and better aesthetic results. Our aim is to present a video, with step-by-step description, of an hysterectomy with bilateral adnexectomy performed by the vaginal NOTES.

Methods: The first and third steps of the surgery, which were the procedures performed in the vagina, were photographed and the second step, laparoscopic, in the peritoneal cavity was recorded. The clinical and surgical records were consulted electronically.

Results: A 69-year-old woman, multiparous, with no relevant personal history, BMI 24.97 Kg/m^2, was proposed for total hysterectomy with bilateral adnexectomy, due to endometrial polyp and abnormal uterine bleeding. Previously resectoscopy was attempted to remove the polyp, but this was not possible due to severe stenosis of the cervical canal. After explanation of the technique and surgical risks, she opted for the vaginal NOTES. The surgery was uneventful. The day after the surgery, she was comfortable, without pain and without any other relevant complaints. She was discharged 24 hours after surgery and in the postoperative visit, the objective examination was normal, and she had no symptomatic complaints. Histology revealed a uterus with adenomyosis and an endometrial polyp.

Conclusions: The vaginal NOTES is a promising technique, in which it is possible to reduce surgical and hospitalization times associated with major surgeries performed in gynaecology. In this way, this technique may lead to an increase of the surgical quality and greater patient satisfaction.

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Early severe ovarian hyperstimulation syndrome (OHSS) - case report

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Introduction and aims of the study: Ovarian hyperstimulation syndrome (OHSS) is a uncommon life-threatening complication of ovarian stimulation associated with ART procedure. It appears in approximately 1% of IVF cycles. Severe form is characterized by ovarian enlargement, oliguria, hemoconcentration and fluid shift into extravascular compartments such as peritoneum, pleura and less often pericardium. Early OHSS occurs within 2–7 days after HCG trigger administration.

Methods: Case report of severe ovarian hyperstimulation syndrome (OHSS) due to IVF procedure with bilateral pleural effusion and ascites.

Discussion: A 36-year-old patient underwent IVF procedure with preimplantation diagnostics due to recurrent miscarriage with proven genetic background. Stimulation was performed in the progesteron protocol. Gonadotropin doses: Menopur 150j. Stimulation time 11 days. Trigger: 2 ampoules of analog GnRH (Gonapeptyl daily 0,1mg/ml) and HCG (½ ampoule of Ovitrelle). During pick-up, 61 cumulus oocyte complexes were collected, of which 26 MII were obtained. 12 MII's were fertilized. The rest was frozen. 7 embryos were obtained and sent for preimplantation examination. On the 2nd day after the procedure, the patient reported to the clinic with symptoms of nausea, abdominal bloating and abdominal pain. Due to OHSS, she was referred for hospitalization. During hospitalization, bilateral effusions in the pleural cavities and ascites were confirmed. Drainage of the pleura and peritoneum was performed for 7 days. In addition, anticoagulant treatment, fluid therapy and albumin therapy were applied resulting in improvement of the patient's clinical condition.

Conclusions: In the case of stimulation protocol, that ends with the collection of a large number of cumulus with the use of the HCG trigger, the occurrence of early severe OHSS should always be considered. Patient after that kind of procedure should be frequently and properly monitored in order to detect OHSS early and prevent long-term complications.

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Application of hysteroscopy and vaginoscopy in follow up of young patients with genital tract rhabdomyosarcoma

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Objective: Does operative hysteroscopy and vaginoscopy can be applied in detection of relapse and as a follow up of young patients with RMS of genital tract.

Methods: From 2019 to 2022y, we performed hysteroscopies and vaginoscopies in patients with RMS of genital tract to look for early signs of relapse and to evaluate local efficacy of oncological treatment.

Procedures were conducted under the short general anesthesia with 4 or 5 mm Bettocchi hysteroscopes recollecting the age of young patients. The gynecologist was looking for any abnormal tissue ,especially in the region of primary location of the disease. The biopsy was taken in case of abnormal tissue and as a routine control when a pathological changes were absent .

Results: During 3 years of observation we carried out endoscopic procedures in 5 girls with genital tract RMS. In these group of patients we performed 11 hysteroscopies and 6 vaginoscopies. In 82,3 % of cases we guided representative biopsies. In one example, the biopsy revealed local reccurence of the disease that was not described in MRI scan performed 22 days earlier. The sarcoma relapse was diagnosed in a small polyp of the cervical canal, without any abnormal macroscopic features. In this patient the primary location of the disease was the cervix. On the basis of the lesion found in hysteroscopy, oncological treatment has been appropriately changed. In all other cases, the biopsies were negative, as well as the MRI results, which showed no cancerous changes.

Conclusion: The gynecological minimally invasive procedures like Bettocchi hysteroscopy and vaginoscopy may be considered as a safe and useful tool in evaluation of succeeded oncological treatment in the place of disease and in the early relapse detection of genital tract rhabdomyosarcoma.

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Sertoli cell tumor in a 35-year-old woman – case report

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Sertoli-Leydig cell tumors are very rare and account $<0.5\%$ of primary ovarian neoplasms. This group of tumors belongs to the sex cord-stromal category and is diagnosed mostly in patients in their reproductive age. Sertoli cell tumor is a subtype of Sertoli-Leydig cell tumors and accounts only 4% of all cases in that group of neoplasms, what makes it even more uncommon.

The main goal of this article is to present a rare case based on our own experience.

A 35-year-old woman was referred to Department of Obstetrics and Gynecology by Emergency Room due to abdominal pain and accidentally found in CT ovarian tumor. A TV ultrasound scan confirmed presence of the tumor, what was preliminary classified as teratoma. After gynecology consoling, a decision of laparoscopic surgery and tumor excision was made. The procedure was not complicated. 3 weeks after the surgery, the histology of the lesion was reported as Sertoli cell tumor. The patient was admitted to the hospital again. CT of chest, abdomen and pelvis with contrast was made - there were no other lesions described. The patient was operated in laparoscopy - due to patient's reproductive life plans, the right adnexectomy was performed, left ovarian, greater omentum and peritoneum samples were taken. The next day the woman was discharged from the hospital. There were no lesions described in histopathology. Currently, the patient is under observation and periodic gynecological monitoring.

Sertoli cell tumors are extremely rare and there is still not enough data concerning optimal treatment.

In a case of Sertoli-Leydig cell tumors, it is really hard to make accurate diagnosis due to the absence of special signs.

It is very important to choose the most conservative treatment, because most of the patients are young women with reproductive life plans

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Case report of 13-year old girl with rms of the uterus- gynecological intervention and oncolfertility procedure

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Introduction: This is a case report of a 13 year old girl diagnosed with rhabdomyosarcoma embryonale of the uterus. After the initial chemotherapy there was an abnormal tissue left in the anterior wall of the uterus in MRI report. The patient was qualified for two step diagnostic approach to detect any residual neoplasia. First was operative hysteroscopy and the second was diagnostic laparoscopy combined with oncofertility procedure.

Methods: Hysteroscopy was performed under general anesthesia with 10 mm resectoscope with bipolar energy. The samples were taken from the anterior wall from a place described in MRI. Pathomorphological samples revealed no neoplasia. As a hysteroscopy can only remove tissue from the cavity of the uterus and from the uterus wall from the cavity site, we planned subsequent laparoscopy to perform removal of the anterior wall of the uterus. The uterus cavity was exposed. Then, the anterior wall has been closed with intracorporeal absorbable sutures.

According to planned radiotherapy and potential target volume containing both ovaries, we decided to perform ovarian transposition outside of the pelvis, above the pelvic brim in the same surgery. The ovaries were transposed and fixed laterally in the paracolic gutters. Two metal clips were applied to each ovary to guide subsequent roentgenographic localization.

Conclusion: Pathomorphological samples revealed no neoplasia either in biopsy taken in hysteroscopy or laparoscopy. As all the oncological doubts were dispelled the patient continued standard oncological treatment.

As a result of application of minimally invasive endoscopic surgery techniques we could make precision diagnosis and prevent patient from aggressive treatment, using performed intervention to preserve ovarian hormonal function.

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Caroli's disease and pregnancy - Do we expect the unexpected?

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Caroli disease is a rare congenital disorder with multiple segmental cystic dilatation of intrahepatic biliary ducts with no periportal fibrosis and is assciated with recurrent episodes of cholangitis. Carolis syndrome is associated with periportal fibrosis and consequently with portal hypertension, oesophageal varices and splenomegaly. Incidence of carolis disease is 1 in 1,000,000. Associations with renal diseases like Autosomal recessive polycystic kidney disease, medullary cysts and nephronopthisis.

There had been very few pregnancies that has been reported associated with caroli's disease and syndrome. Most of the pregnant woman with carolis disease develop complications like cholangitis and hence are associated with increased morbidity and mortality.Carolis syndrome due to hepatic fibrosis may not present with cholangitis and hence less associated complications

Through this rare case of caroli's syndrome, we explored the progress of the disease and pregnancy and its outcomes

Case summary: 21 year old presented to us at 11 weeks in her second pregnancy for her booking visit.

At 19 years of age, she was diagnosed to have caroli's syndrome during the work up when she presented with urosepsis and found to have grade 3 oesophageal varices, portal hypertension and splenomegaly with distal tubular acidosis and medullary cysts on MRI. She was managed and was on long term beta blockers and sodamint. The first pregnancy was a spontaneous conception which ended up in miscarriage and heavy bleeding. It was managed with termination of pregnancy and blood transfusions.

Within few months, she presented to us with 11 weeks of gestation following a spontaneous conception. She was taken care by medical gastroenterologist, physician and obstetrician and was on beta blockers. During the pregnancy, the kidney functions were closer to normal , but she developed GDM and hypothyroidism which was managed with meal plan and thyroxine. Due to massive splenomegaly, she had pancytopenia with platelets as low as 32000 and microcytic hypochromic anaemia which was managed with parentral iron. Though cholangitis, hypertension were expected to complicate the pregnancies associated with carolis disease and syndrome, she did not develop those complications as expected, probably due to associated fibrosis. At 36 weeks of gestation, steroid prophylaxis was given and with SDP transfusions, she delivered a male baby of2.3kgs by LSCS for Short stature (140cms) and cephalopelvic disproportion. The post natal period was uneventful.

She has presented to us with the next pregnancy, and is expected to deliver in April 2023. She has all the same features that was present in the previous pregnancy. Her maternal abdomen ultrasound showed small medullary cysts with increased cortical echo texture with normal sized kidneys and is associated with distal renal tubular acidosis. She has been put on long term bicarbonate supplementation and beta blockers. She is at present 28 weeks with no other complications in pregnancy except that she has thrombocytopenia of 27000. She is under follow up.

Discussion: Pregnancy in woman with carolis syndrome has been rarely reported. And women with carolis disease is usually associated with complications like cholangitis. In this woman with carolis syndrome though we expected the complications to occur, she did not develop complications . Carolis syndrome may be associated with medullary cystic kidney disease which causes distal tubular acidosis and needs long term bicarbonate supplementation and follow up. The first pregnancy ended up uneventfully probably because of the associ-

ated fibrosis and inspite of the severe portal hypertension and splenomegaly, there were no complications. The second pregnancy is on the follow up and may probably be associated with or without complications.

Hence carolis disease with intrahepatic biliary duct dilation may be associated with cholangitis but probably the carolis syndrome which has an associated hepatic fibrosis may not be associated with life threatening complications and need more literature review. So women with carolis disease may be associated with more life threatening complications and carolis syndrome may not always end up with complications. But would need appropriate multidisciplinary care for to have a safe pregnancy.

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Extramammary Paget's disease of the vulva

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Extramammary Paget's disease of the vulva is a rare dermatologic condition that presents in areas where there are apocrine sweat glands including the vulva, perineum and perianal skin. It presents are erythematous well-demarcated plaques that can become erosive, ulcerated, scaly or eczematous.

We present a case of a 72 year old lady who presented with a lesion over the right aspect of her vulva which had been present for over a year. Upon biopsy of the lesion it was ensued that the lesion was extramammary Paget's disease and invasion could not be excluded. In fact, this condition is associated with a delayed diagnosis due to its rarity and such a delay could lead to invasiveness. Imaging of the thorax, abdomen and pelvis excluded metastasis and a vulvectomy was planned to completely excise the lesion. A right vulvectomy and right inguinal lymphadenopathy was done which confirmed the diagnosis and also showed evidence of superficial dermal invasion but no evidence of inguinal lymph node invasion.

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Vaginismus in 32 year old virgin. Case report

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Introduction and aims of the study: Vaginismus is the body's automatic reaction to some or all types of vaginal penetration. This reaction can be caused even by the process of imagining the situation. Whenever penetration is attempted, vaginal muscles tighten up unconsciously. Patient have no control over it.

Methods: Case report.

Results: 32-year old patient admitted to a gynecological clinic for a routine prophylactic consultation. Woman was healthy with no medical or surgical history. Previously consulted regularly by other specialist, control visits did not show any abnormalities. By collecting more accurate medical information about puberty, sexual history it came to an information that woman was a virgin. She did not admit that fact to any previous specialist. At that time patient started a new relationship and came to a huge distress connected with sexual initiation. During childhood and puberty she did not remember any time of masturbation, or increased sexual drive. She admitted to have no curiosity to sex, her own body or any topics connected with that part of human's life. At the end of the visit patient was examined adequately to the medical history and abilities. Gynecological examination and transrectal ultrasound did not show any organic causes of vaginismus. Patient received a recommendation of psychological and physiotherapeutic consultation, a plan of singleton and couple's sexuological therapy, a suggestion of introduction pharmacotherapy if needed. After three months patient came back with a success of incomplete but not painful penetration, achieving orgasms.

Conclusions: When it comes to sexual disfunctions it is crucial to be very patient with your patient. Building trust and taking time in the relation between doctor- patient gives you an opportunity to dig into medical history. Holistic approach helps to diagnose and set and adequate plan of treatment.

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HSV-1 vulvar infection in a 5-year-old patient

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A 5-year-old patient was consulted in the outpatient clinic due to lesions of the vulva, with complaints of itching and pain. Additionally, she presented with polyuria. The patient's mother observed no improvement after earlier threatment with hydrocortisone, natamycin, neomycin and sulfathiazole. The urynalisys showed no pathology. The patient was generally healthy, with no history of immunosuppresion or prolonged antibiotic treatment. In examination, the vulva was covered with reddended lesions characteristic of herpes simplex viral infection. After administration of aciclovir with clobetazole, along with prophylactic dose of furazidine, both itching lesions and polyuria were treated, and the patient no longer had any complaints regarding vulvar infection. She remains under observation. The family history and in conversation with the patient, as well as in gynecological examination, no sign of sexual abuse was observed. This case raises an important discussion on HSV-1 and HSV-2 infections in children, as it was clearly an HSV-1 infection, probably transmitted by hands of the carers.

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Altered Ataxia-Telangiectasia Mutated Gene as a cause of endometriosis-associated ovarian clear cell carcinoma, novel pathogenic variant

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Endometriosis is a disease characterized by ectopic localization of the endometrial gland and stroma, most commonly seen in the ovary, an estrogen-dependent disease. Some cancer driver genes were mutated

in 26% of endometriotic lesions. Ovarian clear cell carcinoma accounts for approximately 40-50% of endometriosis-associated ovarian cancers. It is often seen in the perimenopausal period between 40 and 50. Genetic mutations in the etiopathogenesis of clear cell carcinoma have been seen as a prominent cause in recent years. Ataxia-Telangiectasia Mutated (*ATM*) Gene (OMIM * 607585) is a tumor suppressor gene that responds to DNA damage by phosphorylating the main players involved in DNA repair and controls the rate of cells growth and division. In this study, we describe a young patient diagnosed with EAOCCC and establish the relation between detected novel pathogenic variants during the genetic investigation of the *ATM* gene. Our patient was only 28 years old. The pathology result was reported as EAOCC stage 3B. Carcinogenic development due to genetic mutations in OCC is an entity that has not yet been clarified. In this case, we detected an ATM:p.Tyr2281PhefsTer3 pathogenic variant, which is a mutation that has not been reported in the literature before and correlated with EAOCC previously. The young age and nulliparity of the patient we presented are critical clinical features. For this reason, in case of detection of complicated endometrioma in a nulliparous woman in the reproductive period, requesting genetic analysis will be beneficial in managing the patients. In addition, EAOCC diagnosed women with *ATM* gene mutations, and their first-degree relatives should be warned about the risk of breast cancer and followed up since there is an increased risk of cancer development.

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Use of diode laser in hysterotomy during open fetal surgery for myelomeningocele - a case report

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Introduction: Myelomeningocele (MMC) is a severe congenital defect of the central nervous system. In 90% of cases, it is associated with Chiari malformation type II (CMTII), hydrocephalus and other symptoms. Intrauterine myelomeningocele repair (IUMR) has a proven neuroprotective effect, but is also associated with chorioamniotic separation (CAS), premature rupture of fetal membranes (PPROM) and prematurity, which worsen perinatal outcomes. These complications remain related to the hysterotomy site. To date, the use of a unipolar electrode during hysterotomy may coincides temporally with the occurrence of bradycardia and absence or reverse of end-diastolic velocities (AEDV/REDV).

Therefore, it is important to search for new, hysterotomy techniques that reduce risk factors for prenatal IUMR complications.

Case report: A 33-year-old woman in 25.4 GA Caucasian race, BMI 29.2 kg/m2 underwent hysterotomy for the indication of fetal CMTII. Ultrasound and MRI imaging of the fetus showed MMC at the L5 level, hindbrain herniation II grade. A hysterotomy was performed in the anterior uterine wall with a diode laser (DL). Stage I - initial incision of the uterine myometrium and chorionic membranes 1 cm in length, stage II - DL widening of the incision with de Bakey clamp on site to 6 cm. Amniotic membranes were sewn to the edges of the opening with a continuous suture. After IUMR, the hysterotomy was closed with two layers of continuous sutures. Controlled delamination of the muscle fibers with complete hemostasis was observed during the DL incision. No fetal distress was observed. Skin-to-skin IUMR time was 120 min.

Results: MRI and ultrasound examination at 31.0 GA indicated scar continuity without CAS. After IUMR, the patient did not require intravenous tocolysis nor blood transfusion. Patient was scheduled for elective cesarean section at 38.2 GA. Newborn 3560g, Apgar 10/10. Uterine scar site without features dehiscence.

Conclusion: The use of DL seems to improve uterine scar healing, provides better hemostatic effect without extensive tissue coagulation. The use of DL during hysterotomy does not alter the biophysical profile of the fetus.

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Bilateral ovarian tumors during pregnancy - case report

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Introduction and aims of the study: A case of a 39-year old woman with bilateral ovarian tumors and ascites diagnosed at 18 weeks of gestation is presented.

Methods: The patient was referred to the gynecologic oncology department due to ascites and bilateral ovarian tumors. On admission she complained of moderate to severe pain in the upper central part of the abdomen. Ultrasound findings were bilateral solid ovarian masses with moderate vascularization (color score 3), measuring 18 cm (right) and 7 cm (left) in diameter and ascites along with a viable pregnancy of 18 weeks. On MRI no other pathologies were seen. Her CA125 level was 782,7 U/ml and AFP was 38,66 ng/ml. 3 days after admission the pain became unbearable and the patient underwent urgent surgery.

Discussion: Intraoperatively, a perforated stomach ulcer was diagnosed and the patient underwent bilateral salpingoophorectomy, omentectomy and partial resection of the stomach. Histopathological report revealed bilateral Krukenberg tumors and gastric adenocarcinoma mixed type (Lauren III). The patient was qualified for chemotherapy according to FOLFOX 4 regimen (oxaliplatin, 5-fluorouracil) and received 3 courses. She delivered spontaneously at 35 + 3 weeks of gestation giving birth to a healthy boy of 2375g and Apgar score of 8 and 10. Further treatment with chemotherapy is now planned.

Conclusions: Bilateral solid ovarian tumors are suggestive of metastatic lesions. Oncological treatment should not be postponed due to pregnancy. Ovaries should be routinely assessed during the first visit in pregnancy.

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A rare case of intravenous leiomiomatosis with metastates to circulatory track- case report

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Introduction: Intravenous leyomiomatosis (IVL) is an extremely rare type of uterine smooth muscle proliferation inside the lumen of vascular vessels. Despite its histologically benign nature, invasion of IVL inside cardiac vessels can lead to serious complications such as circulatory failure and, as the result, heart blockade.

Aim of study: The aim of this case report is to highlight the importance of correct preoperative management of IVL, in order to prevent fatal consequences, obtain the best therapeutic outcome, and minimize the risk of future recurrence.

Metodhs: Case study report

Results: A previously heathy 41-years old women was admitted the Department of Obstetrics, Women's Diseases and Oncological Gynecology CSK MSWiA in Warsaw due to abnormal findings in routine abdominal ultrasonogram (USG). USG revealed pelvic tumor with accompanying extensive thrombosis of ovarian veins and inferior vena cava (IVC). Abdominal magnetic resonance imaging (MRI) revealed an enlarged myomatous uterus 8,5 x 7 x 6 cm with two oval shaped focal lesions located near left ovary with dimensions 5 x 5 x 4.5 cm and 8 x 5 x 6 cm Additionally, vascular CT showed free-floating thrombus extended from ovarian veins, right common iliac vein (CIV), inferior vena cava (IVC) to right atrium. Patient was qualified for single step operation. She underwent total abdominal hysterectomy (TAH) with bilateral salpingo-oophorectomy (BSO) followed by sternotomy carried out in extra corporeal circulation (ECC) with tumor removal from circulatory track. The post operative histopathologic examination revealed the diagnosis of IVL.

Conclusion: Patients with IVL extended into the circulatory system should be managed in multi-speciality teams consisting of oncology gynecologists, as well as vascular and cardiothoracic surgeons, in order to perform radical surgical resection, which is one of the treatment methods that prevents future IVL recurrence.

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Implementation of robotic ups (unilateral pectineal suspension) for the correction of apical prolapse in a high volume laparoscopy center

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Introduction and aims: Pelvic organ prolapse (POP) is a common disorder. Conservative treatment can be addressed; if unsuccessful, surgery is indicated. Surgical treatments such as vaginal hysterectomy (with anterior and posterior repair), sacrospinous fixation and laparoscopic sacrocolpopexy are broadly used as standard surgical procedures. Performing a hysterectomy does not increase the success rate. In addition, the use of synthetic meshes is under debate because of possible postoperative complications. The study aims to describe the implementation of UPS as a minimal invasive mesh-free apical fixation in a high volume laparoscopy center.

Methods: Robotic UPS is a standardized technique of 5 steps to restore the natural anatomical position of the uterus or vaginal cuff. After identifying the cranial part of the pectineal ligament, a non-absorbable suture is placed for lateral fixation. By manipulation of the uterus or cuff intraoperatively, the ideal anatomical reconstruction is simulated. After dissecting the bladder, the medial fixation of the suture is placed, followed by a tension free suspension to restore the physiological anatomy. Prolapse was measured by POP-Q.

Results: In comparison to the standard surgical techniques for POP, UPS provides several advantages. The medial tension-free apical placement combined with normal pelvic floor mobility and the restoration of the vaginal axis allows for normal vaginal function. The technique provides maximum safety, significant reduction of operative time and avoidance of ureter, bowel and hypogastric nerve dissection. This procedure can be performed in a same day discharge setting (SDS).

Conclusions: UPS was first designed, described and performed at the University Pelvic Floor Center of Klinikum Nuernberg, Germany. UPS is a highly efficient minimal-invasive mesh-free surgery, avoiding the need of a hysterectomy. Reliable level one support is achieved, respecting the natural anatomy. This technique can easily be implemented, resulting in efficient and innovative surgical POP treatment.

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Surgery for endometriosis of the sciatic nerve – video presentation

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Introduction: Endometriosis affecting the pelvic nerves is nowadays a resonant disease, mainly due to possible postoperative complications associated with pelvic organ involvement or complications with lower limb mobility. The first papers on the topic of surgery of pelvic nerves affected by DIE were written by Prof. Possover in 2004.

Case presentation: 28 year old 0 grav /0 para, With DIE involvement rASRM: 38, STAGE III, #Enzian: P1 O0/3 T0 + /0 + A3 B2/3 C2, FO (sciatic n. l.dx.) 3 EFI: 5 . Her problems were VAS dysmenorrhea (8), dyspareunia (8), dyschezia (6 deterioration at menses) mictalgia (0, rather more frequent), neocyc. Pain (7-8), pain to right limb, aggravation at menses. We performed the first operation with limited bowel resection, mesorectal flap and complete extirpation of the DIE, leaving the lesion on the sciatic nerve l.dx. and the pelvic wall. After surgery significant improvement in abdominal pain and dyschezia. Persistent pain to the right lower limb with impaired mobility during menses.

MRI: -Pelvic wall infiltrate affecting foramen ischiadicum with large endometrioma extending to pelvic floor. Infiltration in the foramen ischiadicum up to 50 mm in length, penetrating through the foramen ischiadicum and radiating spicularly up to 2 cm into the m. gluteus minimus- atrophy. Infiltration of the n. ischiadicus l.dx. Large endometrioma 6 cm at right pelvic wall caudally extending to the pelvic floor and levator ani.

We would like to present a video of the surgery - second operation performed with radical resection of endometriosis from right pelvic wall and shaving of sciatic nerv, which was performed 3 months later.

Conclusion: Surgery for die affecting the pelvic nerves is a complicated and time-consuming procedure with a high risk of permanent damage, requiring an experienced team.

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Pregestational diabetes - the importance of pregestational counseling - case report

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We present the case of the patient admitted to our department with pregestational diabetes, not covered by maternity care nor pregestational counseling.

A 36 - year old obese woman presented at the 30 week of her third pregnancy due to preterm premature rupture of membranes (pPROM). She was previously diagnosed with diabetes mellitus, obesity and fatty liver disease. The fasting glycemia ranged 200-250 mg%; random glycemia 140-160 mg%. HbA1c level was 8,5 %. She was given intensive insulin treatment. At the admission C-reactive protein (CRP) level was 68. Due to pPROM amoxicillin with azithromycin were given. The next day CRP was 79, the antibiotic scheme was changed for ceftriaxone.

In ultrasound examination polyhydramnios (AFI 48 cm), fetal diaphragmatic hernia, atrioventricular septal defect (AVSD), club foot and scoliosis were found. Estimated fetal weight (EFW) was 2194 g. Amniocentesis and amnioreduction (2400 ml) were performed and fluid was drawn for array Comparative Genomic Hybridization (aCGH).

The following day she had vaginal delivery and a female fetus, 1850 g, 39 cm, in very serious condition (1-1-1-2 Apgar) was born. Intubation was performed in three minutes after delivery, mechanical ventilation was initiated. Esophageal atresia, AVSD, sacral bone agenesis, dysmorphic ribs and vertebral bodies of thoracic and lumbar region, situs inversus, horseshoe kidney, clubfoot were identified. Caudal regression syndrome was supposed. The newborn died during the first day of life. The result of aCGH showed no genetic abnormalities.

In the first eight gestational weeks - critical time during embryogenesis, there is a high impact of elevated hyperglycemia on the embryo development. This case proves the constant need for pregestational counseling for patients with chronic diseases and adequate prenatal care.

Background: Renal cysts and diabetes syndrome (RCAD) is a rare genetic disease characterized by congenital renal anomaly and diabetes. In most cases, it can be classified as maturity-onset diabetes of the young (MODY). Abnormalities of the genital tract are also reported in some affected individuals.

Case: A 28-year-old patient with RCAD syndrome was admitted to the clinic due to a polyp in the cervical canal. The diagnosis of RCAD syndrome in this patient was based on the presence of renal cysts, primary amenorrhea, hyperandrogenism, impaired liver function and MODY5 diabetes which occurred several years before. The patient underwent genetic testing which established 17q12 deletion (the direct genetic cause of RCAD syndrome). Prior to admission, the patient had undergone magnetic resonance imaging (MRI) which revealed multiple renal cysts, dysplastic uterus and an additional spleen. The patient reported no abdominal pain. Primary pelvic ultrasound and physical examination classified the uterine anomaly as left unicornuate uterus with the right distal uterine remnant with visible endometrium (ASRM 2021). Although the endometrium was clearly visible on ultrasound examination, no hematometra or hematocolpos were found. Diagnostic hysteroscopy was performed and revealed no communication between the cervical canal and the left uterine cavity. Additionally, she reported perimenopausal symptoms and presented low AFC and low AMH (0.48 ng/ml). The patient left the clinic with HRT and after 6 months claimed a significant reduction of perimenopausal symptoms. The patient is now considering reproductive plans.

Conclusion: RCAD syndrome may be a cause of congenital uterine anomalies and perimenopausal symptoms. This genetic disorder may be a serious cause of infertility in young adults. In case of reproductive plans, some patients with RCAD syndrome may require an IVF procedure with oocyte donation after surgical repair. Due to primary amenorrhea and no hematometra/hematocolpos, endometrial biopsy for the assessment of responsiveness should be considered.

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Open fetal surgery with mini-hysterotomy for prenatal myelomeningocele repair - case report

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Introduction and aims of the study: Neural tube defects are one of the most common congenital malformations. Thanks to the rapidly developing prenatal medicine, early diagnosis and treatment are possible. Therapeutic options include surgery not only after birth, but also *in utero*. The choice of the surgical method is subjected to continuous reaserch and each of them has a number of imperfections. Open surgery is associated with unsatisfactory obstetric results such as increased percentage of preterm births and premature rupture of membranes due to the opening of the uterine muscle during pregnancy. It seems, therefore, that minimizing the length of the uterine incision may reduce the risk of the abovementioned complications, while maintaining the optimal neurosurgical field for the spinal cord defect repair, including its untethering.

The aim of the study is to present a case of open fetal surgery with mini-hysterotomy.

Methods case report: The study describes the case of a 24-year-old patient, in her first pregnancy, diagnosed with fetal myelomeningocele and qualified for intrauterine surgery, which was performed in the 24th week of pregnancy. The surgery was performed using the open method, with the opening of the uterine muscle by mini-hysterotmy.

Results: During the operation, adequate access to the fetal myelomeningocele area was found, followed by a typical neurosurgical procedure, and shortened time of uterine closure. The postoperative course was uncomplicated.

Conclusions: Minihysterotomy is an effective alternative to classic hysterotomy in prenatal surgery, reducing the risk of obstetric complications. Evaluation of the above technique requires further research.

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Toxic epidermal necrolysis during the early postpartum: a case report and a literature review

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Toxic Epidermal Necrolysis (TEN) or Lyell's syndrome is a rare yet life-threatening dermatological condition presenting as necrosis of >30% of total body surface area of the epidermis and mucous membranes due to a severe immune reaction which is commonly associated with the use of non-steroidal anti-inflammatory drugs, antibiotics and other pharmaceuticals.

In the postpartum period numerous pharmaceuticals such as analgesics and antibiotics as prophylaxis of infections are administered to patients which exposes them to many potential adverse effects.

The case report is a unique description of a patient in the early postpartum who presented with Lyell's syndrome whilst still remaining in the obstetrics ward after the delivery of a healthy neonate. A timely recognition of the symptoms and a successful differential diagnosis of Lyell's syndrome were key factors which maximized the chances of the patient's survival.

The literature review of the condition offers an insight into the diagnostic process and treatment of this infrequent syndrome in the fragile time of the postpartum.

Immunomodulatory therapy which is a novel and often experimental method can reduce the mortality over 5 times, in comparison to treatment with immunosuppression only or lack of full protocol. The multidisciplinary approach guaranteed support and a broad understanding of the complex clinical issues faced by obstetricians during the recovery period of the patient.

High mortality of Lyell's syndrome sufferers brings to attention the need of fast acting with regards to confirming suspicions and deciding upon novel treatment methods which often require daily modifications and frequently a transfer of the patient to a highly specialist Burns Centre.

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Prenatal diagnosis of klippel-feil syndrome using 2d and 3d ultrasound

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Klippel-Feil syndrome (KFS) is caused by the congenital fusion of any of seven cervical vertebrae, which results in a shortened neck with a low posterior neckline and diminished ability to move in the affected area. It is found in 0,5% of live births. KFS can be asymptomatic or cause neurological, craniofacial, limb, digital, urogenital, cardiac, auditor, and ocular symptoms of varying severity. Prenatal diagnosis of this condition is possible, but currently, only a few cases have been reported.

We present a case of a fetus with a fusion of cervical vertebrae and spastic positions of all limbs. Additionally, a small sacral spina bifida, pericardial and pleural effusions were found on the exam, including quality three-dimensional (3D) volume datasets.

A 29-year-old primigravida was sent for a diagnostic scan due to fetal akinesis found in the screening scan. The family history revealed cleft lip and palate. Fetus showed an extended non-movable head with severe torticollis in the left breech. No fetal movements were detected during the scan and after an hour-long verification process. Surface rendering images revealed opisthotonos, the abnormal spastic position of the hands and neck, the abnormal position of the lower limbs and toes, and the lower back view with the sacral spina bifida.

Differential diagnosis of cervical congenital vertebral anomalies includes a broad spectrum of syndromes caused by fusion of the cervical vertebra, such as KFS, Apert's syndrome, Crouzon's syndrome, Goldenhar's syndrome, VATER anomalies, Gorlin syndrome, Fetal Alcohol Syndrome. In the reviewed bibliography on akinesia, we have not found any case secondary to KFS. The syndrome potentially causes spinal cord compression with secondary fetal akinesia, which causes a sequence of complications that will be discussed.

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Amniocentesi with cerclage – the way of prevention of premature birth

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According to ACOG Practice Bulletin No. 234 of 2021, women with a singleton pregnancy, prior premature birth (PB),with isthmic-cervical insufficiency (ICN) who receive progesterone should be informed of the increased risk of PB, and a cerclage may be offered in addition to their treatment.

According to the data of a prospective cohort study at the Center for Fetal Medicine in 2014-16, amniocentesis is considered a necessary component before cerclage in order to prevent intra-amniotic inflammation.

Goal: Selection of pregnant women for amniocentesis combined with cerclage.

Materials and methods: A preoperative examination of 10 pregnant women with ICN and PB in the anamnesis was carried out according to the following criteria: ultrasound cervicometry after 16 weeks, ultrasound of the fetus for viability; clinical assessment to rule out bleeding, PB and premature rupture of membranes (PROM); bacteriological study of vaginal microbiota; amniocentesis to rule out subclinical intra-amniotic infection.

The results: The average cervical length was 21 mm ± 0,3. Transabdominal amniocentesis was performed under ultrasound control. The amniotic fluid was sent for the determination of the level of leukocytes, glucose, Gram staining, leukocyte esterase and bacteriological examination.

30% women had planned caesarean section (CS) at 38 weeks, 20% had vaginal delivery (VD) after 38 weeks, 20% had VD after PROM, 20% women had CS at 33-34 weeks because of premature detachment of the normally located placenta, 10% women had PB at 30-31 weeks. The average birth weight – 2655 g ± 255.

Conclusions: Cerclage with previous amniocentesis can be used to prologate the pregnancy with PB. Our data show that cerclage with amniocentesis can be sused in the second trimester of pregnancy. It can be assumed that these women should be included in prospective studies to improve the effectiveness and safety of the procedure.

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High-risk pregnancy after liver transplantation - a case report

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Introduction: Pregnancy after transplantation is associated with high-risk and has greater risk of developing preeclampsia (PE) leading to HELLP syndrome. One of the many additional causes are immunosuppressive drugs.

Methods - Case report: A 24-year-old woman in 28 + 4 GA, Caucasian race, BMI 31,5, was admitted due to hypertension and with a suspicion of hypothyroidism. She underwent liver transplantation in 2014 caused by autoimmune hepatitis. Since then the patient was constantly under immunosuppressants (encorton, tacrolimus). The patient received neither PE prophylaxis (in the form of ASA), nor initial PE screening has been performed.

Subsequently, generalized edema of the whole body appeared along with resistant hypertension and PE. The following drugs were administered: methyldopa, nifedipine, metoprolol, and 3rd line hypotensive in high peaks of blood pressure (BP). Although intensive multidrug treatment BP peaked up to 180/80 mmHg. Ultrasound shown signs of Fetal Growth Restriction type 1, due to estimated fetal weight in < 3 pct with normal umbilical, mid cerebral, and uterine artery dopplers.

Results: Throughout the hospitalization, the drugs used were increased to the maximum doses, achieving short-term stabilization of BP. On 7th of April her BP reached 160/120 and with pain in the right upper epigastrium region and severe headaches with visual disturbances. Furthermore laboratory results showed the first signs of HELLP syndrome

(Low platelet count, 94 x 10 9 /L, increased concentration of total bilirubin, 1,23 mg/dL). Due to the deterioration of the general condition despite the applied treatment, the patient was qualified for a cesarean section. Delivered newborn scored 10/10 in Apgar scale, with 2330g 48 cm at 34 weeks and 4 days. After the surgery, BP gradually improved. The patient was discharged in general good condition 6 days after delivery due to newborn prematurity.

Conclusion: The recommendations in such situations are not enough comprehensive and the decision making must be based on rapidly changing general patient's state.

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Rare case of postnatal diagnosed twin anemia-polycythemia sequence in mcda twins with normal mca -psv Doppler

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Introduction: Twin anemia-polycythemia sequence (TAPS) is a form of TTTS characterized by a significant discordance in hemoglobin level between twins without significant amniotic fluid discordance. MCA-PSV is considered to be gold standard to diagnose TAPS. However, we had a case with normal MCA PSV who postnatally diagnosed as TAPS.

Summary: Asian, Average built Second gravida spontaneously conceived MCDA twins , presented with liquor discordance at 20weeks 5-days (fetus 1 – AFI- 9cm, Fetus 2- 2.5cm).Followed up with fetal medicine specialist every two weeks with concern for developing twin to twin transfusion . Initial three scans has liquor difference which was consistent and resolved after that three scans . Doppler scans being normal with normal growth pattern . she was followed up every two weeks till 35 weeks . she underwent cesarean section for non-vertex presentation with previous cesarean section. Immediate postnatal One twin polycythemia (Hb-24.7gm%) Twin 2-anemic (Hb-13.8gm%) difference of 10.86gm% suggestive of TAPS sequence . Babies were treated with exchange blood transfusion &blood transfusion. Both babies fared well &discharged in good condition.

Conclusion: Take home message is More specifically, the value of MCA-PSV in predicting polycythemia by itself is not as well established as its use for the prediction of fetal anemia. studies suggest that delta MCA-PSV, rather than the actual MCA-PSV of each twin, is more accurate at detecting TAPS..its important to counsel parents about possibility of postnatal TAPS even with normal dopplers . While MCA-PSV serves as a gold standard for diagnosis of anemia in singletons, the diagnostic accuracy and utility of MCA-PSV measurement for TAPS has been considered uncertain. Counselling of parents and patient education plays utmost importance in managing such cases

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All-fours position vs traditional position in women undergoing vacuum-assisted delivery: the vavade-4 randomized trial protocol

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Introduction and aims of the study: All-fours position has several advantages due to the increase in the posterior diameter of the pelvis and higher mobility of the sacrum, with easier descent of the fetal head and greater chance of posterior to anterior occiput rotation.

It is demonstrated to lower the incidence of perineal lacerations and need for episiotomy. On this basis, we recently suggested the implementation of all-fours position in case of operative vaginal delivery (OVD) and we published a video-simulation on a mannequin. We believe that all-fours position allows to constantly maintain the vacuum wire perpendicular to the cup, lowering the risk of detachment and fetal scalp damage. Moreover, in case of shoulder dystocia, the all-fours is the required position to perform the Gaskin maneuver. The aim of the study is to investigate, for women undergoing OVD during the second stage of labor, the safety, efficacy and the maternal/neonatal outcomes of vacuum application in all-fours position compared with gynaecological position.

Material and Methods: We designed a multicentre, prospective, randomized open trial. Inclusion criteria are women undergoing second stage of labor with singleton, cephalic, term pregnancy and failure to progress or maternal weariness, requiring OVD by vacuum extraction. Exclusion criteria are enrolment refusal, absence of consent, contraindication to OVD. Patients are randomly assigned to group A (OVD in traditional gynaecological position) or group B (testing "all-fours" position).

Discussion: As primary outcome we consider the rate of failure of vacuum delivery (number of cup detachment and the need of emergency caesarean section). Secondary outcomes will be divided in maternal and neonatal.

Conclusions: The Study Coordination Centre is looking forward the approval from Intercorporate Ethics Committee of Novara.

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Acute abdominal pain caused by previously undiagnosed ruptured mucinous carcinoma in pregnancy

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Introduction and aims of the study: Ovarian cancer incidence during pregnancy is rare (estimated as 1:10,000 to 1:50,000) but is second most frequent gynecological cancer diagnosed during pregnancy. Only 3 to 6% of all pregnancy-associated ovarian cysts are malignant, their diagnosis and management are complicated due to the lack of evidence from large randomized trials and cohort studies. The incidence of discovery of adnexal masses has increased with routine use of ultrasound during pregnancy.

Methods: A 32-year-old patient presenting with severe acute diffuse abdominal pain during 36^{+2} weeks of gestation was hospitalized at a second-level perinatal care center. In her reproductive history, she had two vaginal deliveries. Antenatal care was started from 8 weeks of gestation, pregnancy course was physiological. During the first-trimester ultrasound scan at 12^{+6} weeks, an endometroid cyst in the right ovary in size 10.9 x 6.1 x 7.3cm was described. No follow-up was done.

Results and/or discussion: Based on the objective examination and patient complaints at admission, the decision was to perform 1st category Caesarean section due to possible obstetrical emergency. A premature infant was born with Apgar Score 7 and 8. No emergency obstetrical events were noted. Performing an inspection of the abdominal cavity, a ruptured multilobular right ovarian cyst in size 23 x 22 x 6cm was visualized with its content up to 500ml. The mass was removed along with unilateral right salpingo-oophorectomy and omental biopsy. The histopathologic study revealed a mucinous carcinoma Grade 1, pT1c2. The patient was referred to gynecologic oncologists.

Conclusions: Given that ovarian cancer during pregnancy is rare, this clinical case serves to raise awareness of the important role of careful assessment of adnexal masses with ultrasound during pregnancy and if detected, attentive follow-up should be provided.

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Serum calcium among women with pre-eclampsia and normotensive pregnant women in kawempe national referral hospital; a case control study

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Introduction: Serum calcium homeostasis is critical in regulation of blood pressure. Research results on Serum Calcium among Pre-eclampsia patients are inconsistent. **Aims**: Determining the association of serum Calcium levels with pre-eclampsia and compare the mean serum calcium levels of patients with pre-eclampsia and normotensive pregnant women.

Methods: Design**:** Case control study. A total of 202 pregnant women at or above 24 weeks of gestation were recruited in the study from the 27th July - 22nd October 2021 in Kawempe Hospital, Kampala. The cases had pre-eclampsia (101) and the controls were normotensive (101). A questionnaire was filled and then a blood sample was drawn from antecubital fossa of all consenting participants. Total Serum calcium and Serum Albumin were determined spectrophotometrically. A Mann Whitney U test was done to determine the differences between cases and controls for continuous variables. A p- value of less than 0.05 was considered for statistical significance. Logistic regression analysis was done to determine the association.

Results: The mean total serum calcium and mean adjusted calcium levels of the cases were significantly lower than those of the controls (1.98 ± 0.25 versus 2.15 ± 0.19, P value < 0.001), (2.13 ± 0.21 versus 2.20 ± 0.28, P value $= 0.029$) respectively. The difference in total serum calcium levels between the cases and controls was statistically significant as determined by the Mann Whitney U test at a p value of < 0.001. Bivariate analysis found statistically significant association of low Total Serum Calcium with Preeclampsia/Eclampsia; with pregnant women with pre-eclampsia 4. 5 times more likely to experience low Total serum calcium levels when compared to normotensive pregnant women (Odds Ratio 4.51, 95% CI 1.913 – 10.656 p value < 0.001).

Conclusion: Low total serum calcium and low adjusted serum calcium are significantly associated with pre-eclampsia/Eclampsia in studied population.

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First trimester biomarkers of chromosomal aneuploidies in pregnancies with uterine fibroids

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Objective: To investigate whether the levels of the first trimester biomarkers of chromosomal abnormalities are affected by uterine fibroids (UF).

Methods: The data for this study were derived from the prospective screening for chromosomal abnormalities in women attending for routine pregnancy care at 11 + 0 to 13 + 6 weeks' gestation. We compared

measurements of serum-free beta-human chorionic gonadotropin (β-hCG) and pregnancy-associated plasma protein-A (PAPP-A) at first-trimester scan in singleton pregnancies with UF noted at the first-trimester scan to those without UF.

Results: We identified 3125 patients with uterine fibroids at the first-trimester scan and 9375 controls with no fibroids, case-matched according to ethnicity. We created 2 study groups according to the measurements of fibroids. In statistical analyses, we observed significantly higher median of β-hCG MoM in the UF group and significantly lower PAPP-A MoM in the UF ≥ 20 ml group.

Conclusion: The findings of our study indicate that pregnancies in patients with uterine fibroids are characterised by higher levels of β-hCG MoM and a lower levels of PAPP-A MoM in patients with UF ≥ 20 ml. More studies are needed to check whether this fact may affect the first trimester screening for chromosomal abnormalities.

Keywords: first-trimester screening, β-human chorionic gonadotropin, pregnancy-associated plasma protein-A, fibroids, leiomyomas

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Uterine balloon tamponade in postpartum hemorrhage under ultrasound guidance: a retrospective cohort analysis

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Introduction and aims of the study: Appropriate treatment of postpartum hemorrhage (PPH) includes mechanical treatment (uterine massage), pharmacological therapy, and, in cases of refractory bleeding, uterine balloon tamponade (UBT). UBT represents a more accessible, less invasive and expensive method to treat PPH. The use of ultrasound can facilitate intra-uterine insertion and the final verification of the correct positioning of this device. This study aims to demonstrate the role of ultrasound during the Bakri balloon application.

Materials and methods: This was a retrospective study including 370 women admitted to Sant'Anna Hospital in Turin from 2015-2019, who experienced PPH (blood loss > 500 ml) and required Bakri Ballon application. Exclusion criteria were caesarean section (CS), previous CD and previous PPH. We divided the population in two groups: group A (n = 200) experienced the Bakri balloon positioning under ultrasound guidance and group B (n = 170) that received ultrasound check only after the positioning of the device. The outcomes evaluated were the number of repositioning, the application time, blood loss and hemoglobin difference before and after the event.

Results: We found that the 99% of women in group A had the blood loss interruption without any balloon repositioning, compared with the 86% in group B. No one required hemostatic hysterectomy. There was a significant decrease in blood loss in group A, with a mean blood loss of 1000 ml (± 450) versus 1500cc (± 600) of group B, and a shorter time of balloon application in group A as opposed to group B (8 minutes vs 13 minutes).

Conclusions: Our data suggest that Bakri Balloon certainly plays a key role in case of postpartum hemorrhage, because it can ensure a rapid management of this emergency. Moreover, the application of this intrauterine device under ultrasound guidance reduces the need of balloon repositioning.

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Vaginal birth after two caesarean (VBAC-2) – a retrospective analysis of different delivery modes

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Introduction: The total number of deliveries by caesarean section has significantly increased throughout the past decades. This leads to a direct rise in patients being pregnant after two caesarean deliveries. As of today, there is a lack of evidence-based data for appropriate mode of delivery consultation of these patients.

Methods: The study includes all 36+ WBD patients from 01.01.2014 until 31.12.2020, which in previous pregnancies had caesarean delivery twice, giving birth at the obstetrics clinic of the University Hospital Frankfurt. A positive vote by the ethics commission was submitted (2022-325). The analysis includes n = 270 patients. Criteria for exclusion were fetal malformations and delivery before 36+ WBD. n = 79 patients intended a vaginal delivery, 156 an elective caesarean and 17 a sekundary caesarean.

The data analyzed was accessed through the „Perinatalerhebung Hessen". It was complemented by data from the clinic-internal patient data management system.

Statistical analysis was performed with JMP 14.0 (SAS Institute, Cary, NC, USA).

Results: Out of 79 patients intending vaginal delivery, 31 (34%) succeeded. The main indication for a secondary caesarean section was a pathological CTG (8,07%) followed by cephalopelvic disproportion (3,59%). Complete uterine rupture occurred in none of the patients intending vaginal delivery. Blood-loss was significantly lower in the vaginal delivery group (372,58ml) in comparison with the sectio-tertiam group (474,68ml) – p < 0,0001. None of the patients in the vaginal delivery group developed uterine atony. Values for fetal outcome, NICU admission (p = 0,027), necessity for intubation and neonatal maladaptation are similar with a slight superiority of the vaginal delivery group.

Conclusion: Vaginal delivery after two caesarean (VBAC-2) can be assumed safe in our cohort. When indicating or fulfilling the patients wish for section after two caesarean deliveries a secondary section should be considered.

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Mobility of the bladder neck after surgical pop repair

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Introduction: Bladder neck mobility is an important feature in the management of stress urinary incontinence.

Surgical treatment of pelvic organ prolapse (POP) is considered as one of the risk factor of suburethral slings failure, most probably due to excessive restriction of bladder neck mobility.

Aim of the study: The aim of the study was to assess the mobility of the bladder neck after different surgical techniques commonly used in POP surgery in order to define potential risks for SUI surgery efficiency.

Methods: 195 patients with pelvic organ prolapse, were enrolled in the study (29 recto-vaginal fascia plication, 63 pubo-vesical fascia plication, 63 cervicosacropeksy, and 36 anterior vaginal mesh implantation Ingynious anterior A.M.I.). In each patient urogynecological examination was performed including ultrasound assessment bladder neck position at rest and its mobility (the difference between bladder neck position at rest and the Valsalva maneuver measured regarding lower edge of symphysis pubis [mm]).

Results: In case of patients who underwent as cervicosaropexy we showed higher position of bladder neck at rest (4,63 + /-6,97mm v 7,46 + /- 5,32mm; p = 0,026) in the same time US examination did not revel differences in bladder neck mobility.

Similarly, after Ingynious anterior implantation bladder neck position was higher (5,20 + /-11,4 vs 10,8 + /-6,6; p < 0,05) with no impact on bladder neck mobility.

Pubo-cervical fascia plication caused no significant improvement in bladder neck position at rest while this procedure as the only one, restricted its mobility (20,98 + /-9,40 vs 16,37 + /-7,52mm, p < 0,05).

Recto-vaginal fascia plication did not influence examined parameters.

Conclusion: Bladder neck mobility restriction is one of the important factors deteriorating sling procedure efficiency. Therefore, in case of coexisting problems it should be taken onto consideration while planning anti incontinence procedure. According to our data native tissue repair, the procedure that is connected with vaginal wall intervention, is the only one that significantly deteriorated bladder neck mobility therefore patients should be carefully evaluated before sling procedure.

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Robot-assisted transabdominal cerclage

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Introduction and aims of the study: In patients with cervical insufficiency, transabdominal placement of a cerclage at the cervicoisthmic junction may be performed to reduce the risk of spontaneous pregnancy loss and preterm delivery. The laparoscopic approach is equally effective compared to the open approach, but far less invasive. We present a case series of eight patients who underwent robotic-assisted transabdominal laparoscopic cerclage to point out the feasibility and safety of the surgical approach leading to satisfactory obstetric outcomes.

Methods: A group of eight patients aged 26 to 38 years was operated on at our department between 2016 and 2021. All patients underwent robotic-assisted transabdominal laparoscopic cerclage. Operation time and perioperative blood loss were recorded as well as the observed complications. In postoperative follow-up, the obstetrics outcomes were assessed.

Results: All procedures were performed in preconception women. The average operation time was 84 minutes and the average blood loss was 50 ml during the surgery. In all patients, no intra- or postoperative complications were observed. Out of eight patients, six conceived, and four of these pregnancies were terminated by cesarean delivery of a healthy newborn. One of these patients became pregnant again and subsequently gave birth by repeat cesarean section. Two pregnancies resulted in missed abortions managed by dilation and uterine evacuation. In one of these patients, the fetal demise was followed by another subsequent pregnancy resulting in term delivery. Out of eight robot-assisted transabdominal cerclages, there have been six children born to five women so far.

Conclusions: Robot-assisted transabdominal cerclage is very likely a safe and feasible surgical procedure associated with satisfactory obstetric outcomes, minimal blood loss, and a low rate of complications.

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Letrozole as an alternative in the conservative management of tubal pregnancy: is it effective?

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Introduction and objectives: It is hypothesized that the inhibition of estradiol production by administration of letrozole may interfere with physiological effects of progesterone necessary to maintain the pregnancy. Treatment of tubal pregnancy with letrozole would allow to avoid the adverse effects of methotrexate (MTX) in women who decline surgery. The aim was to compare the effectiveness of letrozole with MTX in the management of tubal pregnancy.

Methods: A prospective cohort study was conducted in 2020-2022 among women with a tubal pregnancy. Women with increasing B-human chorionic gonadotropin (B-hCG) concentrations, but lower than 3000 mIU/mL, were included. Women with B-hCG > 3000 mIU/ml, positive fetal heartbeat, intraperitoneal bleeding, pain, falling B-hCG and preferring surgery were excluded. MTX was administered in a single dose of 100 mg intravenously, while letrozole in a dose of 5 mg orally for 10 days. Blood parameters (B-hCG, hemoglobin, creatinine, urea, alanine/aspartate transaminase, gamma-glutamyltransferase, bilirubin) were tested on days 0,4,7.

Results: Of the 90 women with tubal pregnancy, 22 eligible women were enrolled, of whom 14 received MTX and 8 letrozole. The mean age, mean lesion diameter, and mean gestation duration in the MTX and letrozole groups were: 31 vs. 32 years, 13.2 vs. 16.3 mm, 7 + 1 vs. 7 + 0 weeks, respectively. There was no significant difference in blood parameters on days 0,4,7 between the two groups (repeated measures ANOVA p > 0.05). In 4 women treated with letrozole and in 2 women treated with MTX (4/8, 50% vs. 2/14, 14.3%, Pearson's chi-squared test p = 0.07) treatment was unsuccessful (conversion to surgery).

Conclusions: The results did not reach statistical significance, but with a larger sample it would likely be possible to confirm the noticeable trend that letrozole is less effective. The results do not support the use of letrozole in the above regimen as an alternative to MTX.

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IV stage gastric adenocarcinoma in pregnancy. Case report

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Introduction: Gastric cancer detected during pregnancy is a very rare condition (0.025 to 0.1%). In many cases, it is diagnosed at an advanced stage because the symptoms during pregnancy are generally overlooked. We report a case of IV stage low differentiated gastric carcinoma diagnosed at the 30th week of gestation.

Case presentation: A 36-year-old female patient was in the 30th week of her third pregnancy. She was admitted to hospital with the complaint of pain in upper left quadrant, nausea, vomitting and diarrhea for one month. Before that patient has palpated lump in left breast.

An abdominopelvic magnetic resonancr (MR) scan revealed ascites, ileus, unclear changes in the stomach, small and large intestine loops.

She underwent fibrogastroduodenoscopy, where suspicion of a malignant process in the stomach is described. Biopsy was taken - low-differentiated adenocarcinoma of the gastric mucosa with a signet ring cell component. Also breast ultrasound and biopsy of left breast lump was performed – metastasis of gastric adenocarcinoma.

According to the decision of the oncological council, planned to resolve pregnancy at 32 weeks and indicate non-adjuvant chemotherapy. But due to changed doplerometry on the fetal ultrasound, C-section was performed. At 31th week of gestation, she delivered a male infant weighing 1215 g, with Apgar scores of 2/6/7.

One week after C-section, the patient's condition deteriorated rapidly due to the symptoms of high ileus with food intake disorder, malnutrition, electrolyte imbalance, hypoproteinemia, hypoalbuminemia, chronic pain syndrome. Patient was admitted in the palliative care department for symptomatic therapy. On the 10th postpartum day patient has died.

Discussion: Symptoms such as nausea, vomiting, loss of appetite may also occur during the natural course of pregnancy and may cause delays in gastric cancer diagnosis, which affects the prognosis and stage of gastric cancer.

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Basic principles and structure of risk assesment of great osbtetrical syndromes

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Introduction and the aim of the study: to develop a method for predicting the individual risk of developing of great obstetrical syndromes (GOS).

Materials and methods: We analyzed history of 572 pregnant women with GOS, in 81 (prognosis group) with placental dysfunction symptoms. Control group (CG) - 50 practically healthy pregnant. To determine the informational (prognostic) significance, functional, biophysical, hormonal, immunological and hemocoagulation parameters were calculated. Quantitative features were divided into diagnostic intervals, assigned a code. Protocol included: age, data of somatic and gynecological anamnesis, data of pregnancy, results of functional and laboratory examinations.

Results: Placental lactogen in I trimester in the prediction group was 29.4% lower relative to the CG, estradiol - 27,4 %, estriol - 28.6 %, progesterone - 34.4 %, human chorionic gonadotropin - 28.3 % lower, and cortisol - 36.1 % higher. Indicators of hormonal activity of the placenta in early gestation and early II trimester can be prognostic signs of further disruption of adaptive compensatory reactions of the FPC. We found informative changes of values of activated partial thromboplastin time (-23%) and activated recalcification time (+16.2%), which remained at the beginning of the second trimester (-40% and -11.7%, respectively), "r + k" was 33.3% lower in the first trimester and 36% - at the beginning of the second trimester of pregnancy. As a result of the analysis, we have identified indicators with "high" information value (more than 3.0 units) to quantify the degree of individual risk of maladaptive disorders in the FPC. Clinical testing of the scoring method of prediction showed its high sensitivity (91.8%) and specificity (85.6%).

Conclusions: Multidimensional analysis allowed us to develop an effective method of predicting the risk of GOS with high levels of sensitivity and specificity.

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Association between hba1c levels and adverse pregnancy outcomes

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Despite optimization of metabolic balance during pregnancy in GDM (Gestational Diabetes Mellitus), maternal and fetal complications remain higher than in the background population. Glycated Hemoglobin (HbA1c) is a strong indicator of the median glucose blood levels for the three months before the analysis. During pregnancy, the ideal HbA1c level should be lower than the recommended values. HbA1c levels are a strong predictor of maternal and fetal complications.

We examined if there was an association between glycated hemoglobin (HbA1c) levels and adverse pregnancy and neonatal outcomes. Retrospective study of women with GDM surveilled at CHTV from January 2016 to December 2021. Data were collected from clinical records. Missing data were excluded. The statistical analysis was made using $\chi 2$ test. p-value <0.05 was considered statistically significant.

1051 pregnant were surveyed during the study period but only 890 met the study criteria. Women were divided into groups taking into account HbA1c levels. Group A: HbA1c levels $<4.5\%$ with a total of 55 pregnant of which 20% had a cesarean delivery (N = 11). Group B: HbA1c levels between 4.5-5.5% with a total of 662 pregnant of which 24.6% had a cesarean delivery (N = 61). Group C: HbA1c levels of $\geq 5.5\%$ with a total of 173 pregnant of which 35.26% had a cesarean delivery (N = 61). The association between cesarean delivery and HbA1c levels was statistically significant ($p = 0.010$). Women with higher HbA1c levels had more risk of cesarian delivery. The association between HbA1c levels and APGAR score was not statistically significant.

Women with less controlled GDM based on higher levels of HbA1c had more risk of cesarean delivery

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Evaluation of pdgf-ab, pdgf-bb, tgf-α, EGF and ang-2 as potential biomarkers in the diagnosis of endometrial cancer

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It is relevant to find new diagnostic biomarkers for endometrial cancer. This study aimed to investigate whether PDGF-AB, PDGF-BB, TGF-α, EGF, and ANG-2 could be considered as new useful markers for diagnosis of endometrial cancer. 93 women diagnosed with endometrial cancer (EC) and 66 patients with non-cancerous endometrial lesions (NCEL) were included in this study. The preoperative plasma PDGF-AB, PDGF-BB, TGF-α, EGF, and ANG-2 levels were determined by a enzyme-linked immunosorbent assay (SunRed Biotechnology, Shanghai) according to the manufacturer's protocol. Statistical analysis was performed using Statistica 13.3 software. The following statistical methods were used to evaluate the collected research material: statistical description and the non-parametric Mann-Whitney U test of significance. A diagnostic test based on the ROC curve was also used. Median serum levels of PDGF-AB, PDGF-BB, TGF-α, EGF, and ANG-2 were significantly higher in the EC group compared to NCEL (for PDGF-AB, PDGF-BB, TGF-α and ANG-2 $p = 0.0000$; for EGF $p = 0.0186$). The cut-off level of PDGF-AB was set at 127.69 pg/ml with the sensitivity of 87.1% and specificity of 66.67% (AUC = 0.78, $p < 0.000001$). The cut-off level of PDGF-BB was set at 207.86 ng/L with the sensitivity of 82.8% and specificity of 75.76% (AUC = 0.85, $p < 0.000001$). The cut-off level of TGF-α was set at 33.85 ng/L with the sensitivity of 82.8% and specificity of 75.76% (AUC = 0.82, $p < 0.000001$). The cut-off level of EGF was set at 934.76 pg/ml with the sensitivity of 83.87% and specificity of 28.79% (AUC = 0.61, $p = 0.018472$). The cut-off level of ANG-2 was set at 3120.68 pg/ml with the sensitivity of 72.04% and specificity of 93.94% (AUC = 0.87, $p < 0.000001$). It was concluded that all the proteins studied could be potential diagnostic markers in endometrial cancer.

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The value of il-1α, il-1β, il-6, il-8 and tnf-α as potential diagnostic biomarkers in endometrial cancer

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It is relevant to find new diagnostic biomarkers for endometrial cancer. This study aimed to investigate whether IL-1α, IL-1β, IL-6, IL-8, and TNF-α could be considered as new useful markers for diagnosis of endometrial cancer. 93 women diagnosed with endometrial cancer (EC) and 66 patients with non-cancerous endometrial lesions (NCEL) were included in this study. The preoperative plasma IL-1α, IL-1β, IL-6, IL-8, and TNF-α levels were determined by a enzyme-linked immunosorbent assay (SunRed Biotechnology, Shanghai) according to the manufacturer's protocol. Statistical analysis was performed using Statistica 13.3 software. The following statistical methods were used to evaluate the collected research material: statistical description and the non-parametric Mann-Whitney U test of significance. A diagnostic test based on the ROC curve was also used. Median serum levels of IL-1α, IL-1β, IL-6, IL-8 and TNF-α were significantly higher in the EC group compared to NCEL (for all proteins p = 0.0000). The cut-off level of IL-1α was set at 13.9 pg/ml with the sensitivity of 91.4% and specificity of 84.85% (AUC = 0.94, p < 0.000001). The cut-off level of IL-1β was set at 2275.21 pg/ml with the sensitivity of 97.85% and specificity of 40.91% (AUC = 0.72, p = 0.000003). The cut-off level of IL-6 was set at 117.13 pg/ml with the sensitivity of 63.44% and specificity of 81.82% (AUC = 0.72, p = 0.000002). The cut-off level of IL-8 was set at 176.45 ng/L with the sensitivity of 96.77% and specificity of 43.94% (AUC = 0.71, p = 0.000004). The cut-off level of TNF-α was set at 324.22 ng/L with the sensitivity of 86% and specificity of 84.8% (AUC = 0.93, p < 0.000001). These results suggest that all of the proteins studied could be potential biomarkers in the diagnosis of endometrial cancer, particularly highlighting the importance of IL-1α.

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Effect of digital medical education in improvement of evidence based knowledge for gynecologists taking international memership exams

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Introduction & Aim: Despite the established interest in evidence-based practice (EBP) as a core competence for clinicians, evidence for how best to teach and evaluate EBP remains weak. This interventional study aims to study the effectiveness of digital medical education of teaching, complementing the traditional teaching to enhance the knowledge and skills of the gynecologists by using interactive methods &evaluation

Methods: We did before and after interventional study design amongst 3000 gynecologists trained with StudyMEDIC digital medical education platform in year 2021&2022 preparing for international membership (MRCOG).we compared Pre and Post test score of students undergoing online training, based on mock tests, OSCE stations. To understand the effectiveness of training, periodic feedbacks with question validation was done. Clinical skills evaluated with video HomeWorks as well.

Results: There was significant improvement in the performance of students post training .A repeated measures ANOVA with a Greenhouse-Geisser correction determined that mean test score concentration differed statistically significantly between time points. F value was 915.37 and p value was < 0.001. Post hoc analysis with a Bonferroni adjustment revealed that Test scores were statistically significantly increased from pretest to post test1and pretest to post test 2 and post-test1to post-test 2. Chi Square test was done to analyze the difference in proportion of types of feedback answers. There was a very highly significant increased proportion of very good feedback for all questions. $P < 0.001$. $X^2 = 75.37$. Cramer's V Correlation 0.051 $p < 0.001$.The limitation of study was no randomization &no comparison done with various face to face platforms

Conclusion: There was a significant improvement in knowledge amongst the clinicians, though perceived as an effective tool for imparting knowledge which is digitalized can help clinicians in their busy schedule .Digital medical education can be the future foe imparting knowledge and clinical skills through various media.

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Role of TGF-Beta in the progression and development of endometriosis

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Introduction and aim of the study: The major factors that could predispose to endometriosis in the minor pelvis are etiological, environmental, epigenetic, and inflammatory factors. Moreover, other theories that might be concerning in this particular disorder are oxidative stress, the inflammatory theory, and increased levels of miRNA, which favor the survival of the pathological cells. Nowadays, medical or surgical therapies are used to treat patients.

Materials and Methods: The investigations are based on the comparison of tumor growth factor beta amounts in lymphocyte supernatants, withdrawn from patients. The study included a total of n = 80 patients, 50 of whom had endometriosis (study group), and 30 of whom were healthy or had another pathology. The received results were revealed by the use of the multiplex method (Bio-plex®), which takes advantage of xMAP technology. The supernatants' results were sorted according to the ASRM category dependents.

Results: Hence, concerning supernatant results, TGF beta enhances according to the advanced ASRM category. The Kruskal-Wallis test reveals a statistically crucial enlargement of TGF beta in the study group compared to the control group. Most likely, it is particularly associated with a function of TGF beta per se, which led to the formation of the proliferative phenotype of ectopic cells as well as increased cell survival.

Conclusions: In women with endometriosis, there is a significant increase in the release of cytokines, particularly TGF beta, in vitro. Presumably, it might be linked with the crucial function of TGF beta in the development and progression of the disease. However, in order to determine the importance of an increase in TGF beta on the progression of endometriosis, three subunits of TGF beta (1, 2, and 3) must be identified and compared according to an individual stage of progression. Early detection of the increased level of TGF beta may obviate dysregulation of immune cells, initiate angiogenesis, and prevent apoptosis. This phenomenon needs more attention and a much broader survey.

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The role of prophylactic internal iliac artery ligation in abnormally invasive placenta undergoing caesarean hysterectomy

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Introduction and objectives of the study: Incorrect implantation of the placenta is observed when the placental villi penetrate through a very thin layer of the decidua, in some cases they can reach the uterine muscle and in extreme cases even the peritoneum or bladder wall. Complications associated with incorrect placental implantation include the risk of implantation site hemorrhage and impaired retraction and uterine atony after delivery. In addition to pharmacological methods of devascularization of the uterine muscle, more advanced surgical techniques are also used, including bilateral ligation of the internal iliac arteries. Purpose of the study is identify the role of bilateral internal iliac artery (IIA) ligation on reducing blood loss in abnormally invasive placenta undergoing caesarean hysterectomy.

Methods: In this parallel-randomized control trial, 108 pregnant females with ultrasound features suggestive of abnormally invasive placenta were enrolled. They were randomized into two groups; IIA group (n = 48 cases) performed bilateral IIA ligation followed by caesarean hysterectomies, while Control group (n = 60 cases) underwent caesarean hysterectomy only. The main outcome was the difference in the estimated intraoperative blood loss between the two groups.

Results: There was significant difference between the two groups regarding the intraoperative estimated blood loss. The operative procedure duration varied significantly between the two groups. Also, the hospitalization time of patients who underwent bilateral ligation of the internal iliac arteries during the procedure was statistically shorter.

Conclusions: Bilateral internal iliac artery ligation, in cases of incorrect implantation of the placenta undergoing caesarean hysterectomy, can significantly reduce the amount of blood loss and operative procedure duration.

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Congenital cytomegalovirus infection in small for gestational age fetuses – retrospective single-center cohort study

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Objective: According to obstetric literature cytomegalovirus infection (CMV) is one of non-placental causes of intrauterine growth restriction.[1] Historically it was estimated that 5 % of growth restricted fetuses had one of all TORCH infection, particularly CMV. Newer data state that only a few cases of CMV infections were diagnosed in the small for gestational age (SGA) population, however the group sizes were small.[2-5]

Methods: This is a retrospective single-center cohort study analyzing the frequency of CMV infection in SGA population. SGA neonates were defined as the ones with birth weight below the 10th centile for a given week on the Fenton growth chart. This cohort has been selected from electronic records of 45828 singleton deliveries from 2014 to 2020.

Results: A total of 45816 newborns data were eligible for final analysis. Records of 12 patients were excluded because of missing data. There were 2531 SGA fetuses in the database (5,55%). We found 26 neonates with CMV infection confirmed by urine PCR, out of them there were 7 SGA neonates (0,28% of SGA group); 18 of appropriate for gestational age (0,04% of AGA) and only one large for gestational age (0,03% of LGA).

Conclusions: CMV infection is statistically more frequent in SGA neonates population than in AGA and LGA group ($p < 0,001$), but frequency is much smaller than previously reported - 0,28%.

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Foley catheter for labour induction among patients with premature rapture of membranes – a randomized controlled trial

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Background: Prelabor rupture of membranes (PROM) occurs in 8-10% of pregnancies. Studies have demonstrated that the risk of maternal sepsis and neonatal infection secondary to chorioamnionitis increases with duration of PROM. According to available researches early birth for PROM at term can be the intervention reducing maternal and neonatal infections. In case of an unfavourable cervix, the use of mechanical methods like Foley catheter for cervix ripening demonstrates good effectiveness and safety.

Objective: The aim of this study was to assess the effect of pre-induction cervical ripening procedure with the use of Foley catheter compared to expectant management in premature rupture of membranes in full-term pregnancies.

Methods: This was a single-center nonblinded randomised controlled clinical trial. The study group was 104 nulliparas at term with PROM. A group that underwent Foley catheter cervical ripening prior to oxytocine induction of labour was compared to a group that had only oxytocine induction performed.

Results: The average interval from PROM and delivery was similar in both groups (1314 minute vs. 1378 minutes; $p = 0.6194$). Labour induction was necessary in 29,7% women in Foley catheter group compared to 43,8% subjects in delayed induction group.

Cesarian section occurred in 21.3% women in Foley catheter insertion in comparison to 34,2% in delayed oxytocin infusion group.

Maternal and neonatal outcomes were similar between the groups. The incidence of chorioamnionitis and neonatal antibiotic administration was low in both groups.

Conclusion: Foley catheter is an effective alternative to delayed oxytocin infusion for labor induction in women with an unfavourable cervix in term premature rupture of membranes.

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Some genetic aspects of covid-19 severe course in pregnant women

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Introduction: The severe manifestations of Covid-19 often occur in persons without known risk factors, which determines the search for genetic determinants of susceptibility to a severe course of the disease.

Aims of the study: To determine the genetic determinants of the severe course of Covid-19 in pregnant women

Methods: 21 pregnant women with a severe course of Covid-19 (main group). For comparison, we used the results of the distribution of genotypes in clinically healthy women, known from literary sources (control group). Genomic DNA for molecular genetic analysis of gene variants ACE (I/D, rs 4340), PGR (Alu insertion), ESR1 (A351G, rs 9340799). PON1 (C108T, rs 705379) was isolated from the peripheral blood. Variants of genes were determined using polymerase chain reaction.

Results: The majority (81.0%) of pregnant women with a severe course of the disease were carriers of the ID genotype of the ACE I/D polymorphism, while in the control group there were half of them (49.02%, OR = 4.42, CI 1.391;14.048). We found significantly higher frequency of genotype T2/T2 of the Alu insertion of the progesterone receptor gene (PROGINS): 19.0% versus 2.4% (OR = 12.47, CI 1.3303;119.318). In 28.6% of women carriers of the unfavorable GG genotype of estrogen receptor α (ESR1) gene polymorphisms A351G were found, which did not occur at all in the control group. We found a lower frequency of carriers of the SS genotype of the Paraoxonase-1 (PON1) gene polymorphism (19.0 vs. 33.3%) and a higher frequency for ST (61.9 vs. 47.1%), however no significant difference in the distribution of PON1 gene genotype carriers was found.

Conclusions: The genetic determinants of the severe course of Covid-19 in pregnant women can be the ID genotype of the ACE I/D polymorphism, the T2/T2 PROGINS genotype and the GG genotype ESR1 A351G.

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Klippel-trenaunay syndrome and pregnancy – the case report

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Introduction: Klippel-Trenaunay Syndrome (KTS) is an extremely rare condition (occurrence 1:100,000) that is associated with the abnormal development of blood vessels, soft tissues (skin and muscles), and bones. A triad of symptoms characterizes the disease: a red birthmark called a port-wine stain, abnormal overgrowth of soft tissues and bones, and vein malformations. The recognized cause of KTS is genetic mutations, primarily in the PIK3CA gene. During pregnancy, there is a significant increase in the risk of venous thromboembolism, thrombotic episodes, and severe, life-threatening postpartum haemorrhage.

Case summary: This is a case report of KTS in a 17-year-old primiparous woman whose disease manifested with asymmetric hypertrophy of the lower extremities, vascular malformations involving both lower extremities and the back's lumbar region, and varicose veins within the lower extremities, vulva, and vagina. Massive varicose veins in the anterior uterine wall were also diagnosed during pregnancy. The patient was consulted by specialists in vascular surgery, radiology, transfusiology, laryngology and anesthesiology. Thromboprophylaxis with low-molecular-weight heparin and elastic compression of the lower extremities' vessels were implemented. Serial ultrasound examinations confirmed proper fetal development and well-being. Due to massive vaginal and vulvar varicoses constituting an obstacle to vaginal delivery, an elective cesarean section was performed at 38 weeks. The procedure was performed under general anaesthesia due to capillary malformations of the back's lumbar region. Bleeding remained within normal limits during surgery and in the early postpartum period. A male neonate

weighing 3170 was born in good birth condition: Apgar scores at 1 and 5 minutes were 9 and 10 points, respectively. Effective thromboprophylaxis and elastic compression were continued in the puerperium.

Conclusion: Intensified and individualized multidisciplinary care for pregnant women with KTS should be offered. Because of the risk of life-threatening complications, the location and severity of vascular malformations should be diagnosed before pregnancy.

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Urethral funneling changes after successful and unsuccessful tvt implantation in women with stress urinary incontinence

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Introduction: There are still no unequivocal methods on the operation and cause of failure of midurethral slings. Objective diagnostic methods before and after surgery in patients with SUI are sought. Pelvic floor ultrasound allows visualization of the pelvic floor and artificial materials at rest and dynamically.

Aim of the study: Evaluating urethral funneling (UFUNN) at pelvic floor sonography by transvaginal probe (PFS-TV) in women before and after TVT implantation.

Methods: 106 women aged 60,8 years (47-77), with SUI were prospectively evaluated before and 6-months after TVT implantation: interview, clinical examination with cough and pad test, urodynamics, PFS-TV. At PFS-TV urethral length (UL), UFUNN width (W) and length (L) were measured during maximal Valsalva in women with full bladder.

Results: 91 women were cured, 15 - not-cured (13-with improvement, 2-without).

Before the operation all patients had long UFUNN.

After TVT in cured women we noticed no funneling (group CNF, $n=70$) or short urethral funneling (group CUF, $n=21$), while all non-cured (group NC) had long urethral funneling.

We compared changes of UFUNN diameters before and after the operation between CUF vs. NC:

CUF: UFUNNL (14.2mm/10.3,$p<0.02$), UFUNNW - NS (differences <1mm),

NC: all paramaters NS.

There were no differences in preoperative UFUNN diameters between cured and non-cured patiens.

Conclusions: In cured women TVT implantation may have 2 different influences on UFUNN dimensions: - liquidate UFUNN or - cause shortening without influence on width. In women with persistent SUI after TVT the diameters of UFUNN remain the same. Our study confirmed that long urethral funneling may be used to diagnose SUI and that short urethral funneling is not a sign of SUI. Our study suggests that evaluating of urethral funneling may be helpful to diagnose patients before and after anti-incontinence procedures. Pre-operative UFUNN diameters seems to have no influence on SUI cure.

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A comparative analysis of non-invasive preimplantation genetic testing for aneuploidies using next-generation sequencing on spent culture media versus trophectoderm

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Ni-PGTA (Non-invasive Preimplantation Genetic Testing for Aneuploidy) is a relatively new testing method that analyzes spent culture medium from in vitro fertilization (IVF) embryos to determine the genetic makeup of the embryos. This non-invasive approach eliminates the need for biopsy and allows for the identification of chromosomal abnormalities such as aneuploidy. The utility of ni-PGTA is to provide an efficient, accurate, and safe method for preimplantation genetic screening. The concordance between ni-PGTA and traditional biopsy-based methods for detecting aneuploidy is high, but still further research is needed to fully evaluate its accuracy and reliability. Purpose of this study was to analyze concordance between trophectoderm and spent culture medium.

Methods: The study was conducted in 2021-2022 and approved by the the Bioethical Committee operating. Informed consent for participation in the study was obtained from all patients. A total of 60 embryos were obtained from 11 patients after 6 days of culture. Samples of spent culture medium and trophectoderm biopsy were collected.

Whole genome amplification and NGS analysis of all materials was conducted using the SurePlex Kit and VeriSeq PGS (Illumina, San Diego, CA, USA) according to manufacturer protocol.

Results: The overall concordance rate between the ni-PGT-A for day 6 and PGT-A was 52/55 (94,5%). Sex chromosome consistence between the ni-PGT-A for day 6 and PGT-A was 51/55 (92,7%)

Conclusion: The results of invasive PGT-A using TE are similar to the non-invasive method based on SCM. These results are another piece of evidence confirming utility of SCM analysis for the purpose of aneuploidy evaluation. Andrii Berbets, Yevgen Kostin, Ruslana Dutchuk, Yevheniia Poliakova, Dmytro Berbets, Iryna Kondratova, Kostiantyn Ostrovskyi

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Ukrainian maternity clinics in time of war: a struggle for life

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In February 2022 Russia has started a full-scale invasion into Ukraine. Tens of thousands of innocent people were killed, and many Ukrainian hospitals were completely/partially destroyed or seriously damaged. Unfortunately, the maternity clinics also did not become an

exception. Also, many Ukrainian medical institutions are located in the regions which were occupied by Russian army, some of them currently (January 2023) still not liberated.

As of October 1, 2022, out of 346 medical institutions licensed by the National Health Service of Ukraine for 2022 as providers of medical assistance during childbirth, 77 institutions were located in the occupied territories, and as of December 13 – 36 such institutions. Many of the Ukrainian obstetricians-gynecologists had to leave their places of livings to avoid Russian occupation, some of them were forced to leave the country, some of them joined the Ukrainian Armed Forces. (The exact numbers are currently unknown.) It would be no exaggeration to say that each and every maternity clinic in Ukraine which is currently working, experiences troubles due to regular blackouts caused by periodic shellings by Russian missiles; such shellings and blackouts put at risk lives of our patients: pregnant women, mothers at birth and newborn babies, including premature ones. In addition, in 2022 reportedly 5 million people, mostly women and children, fled from the country across its western borders. This fact also seriously afflicted the demographic situation in Ukraine, which will not revert back to normal at least until the end of war.

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Use of power morcellation during minimally-invasive gynaecological procedures in Poland

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Introduction and aims of the study: Power morcellation is a surgical technique enabling removal of presumably benign uterine mass during a laparoscopic procedure, which was widely used until 2014. Nowadays special precautions are advised in order to decrese the risk of disseminated peritoneal leiomyomatosis and spread of occult malignancy. The aim of this study was to analyse power morcellation use among Polish gynaecologists.

Methods: It was a cross-sectional study performed by means of an online questionnaire regarding different aspects of power morcellation. Invitations were sent via e-mail to members of the Polish Society of Gynaecologists and Obstetricians and to participants of major Polish gynaecological congresses. Altogether 256 answers were collected in 2018-2019 from gynaecologists practicing in Poland.

Results: 223 (87%) of respondents answered that they perform gynaecological surgeries on a regular basis. 157 (61%) of respondents admitted that they use power morcellation in their daily practice. 82 (32%) indicated that they changed patients' qualification criteria or power morcellation protocol after the results about the association between morcellation and possible malignancy spread had been published. Twelve (5%) respondents indicated that the main reason they do not use power morcellation is the occult malignancy spread risk, 65 (25%) do not use this method because of lack of equipment, and 15 (6%) answered that power morcellation is not accepted by their department policy. 65 (25%) of the respondents provide patients with spoken and 47 (18%) with written information about risk associated with power morcellation during obtaining informed consent before the procedure. 50 (20%) of the respondents experienced in their practice cases of malignancy in a patient with presumed benign condition, who underwent power morcellation.

Conclusion: More than half of the respondents use power morcellation in their daily practice. Unified guidelines regarding the advised power morcellation protocol might be needed to ensure best quality of care and patients' safety.

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Impact of inflammatory bowel disease on perinatal outcomes – Case report

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Inflammatory bowel disease (IBD) is a term describing Crohn's disease and Colitis ulcerosa, characterized by inflammation of the gastrointestinal tract affecting more than 1,5 million women in US. The aim of this study is to present a clinical case of pregnant woman, who developed a severe phase of IBD and its influence of perinatal outcomes.

38-year old woman was admitted to the hospital at 26 weeks of pregnancy because of massive edema of the lower limbs, severe diarrhea, hypoalbuminemia 1,8 g/dl (3,5-5 g/dl), abnormal coagulation results, increased level of C-reactive protein 41,73 mg/l (0-5 mg/l), hyponatremia 123 mmol/l(136-145mmol/l). Sigmoidoscopy was performed, intestinal lesions suggested inflammation or neoplastic disease. CT results indicated on generalized intestinal inflammation with unknown origin. Patient was treated by steroids (methylprednisolone), parenteral nutrition, antibiotics, sodium and potassium suplementation, blood transfusions. Second colonoscopy and pathology results indicated IBD with high probability of Crohn's disease. CTG and fetal ultrasound examinations were performed.

After 4 weeks of intensive treatment patient was discharged at 30 weeks in good general condition. Lower limbs edema, diarrhea resolved, rhythm of bowel movements had stabilized, which resulted in a weight loss of 22 kg and fluid balance normalization. After hospitalization fetal growth restricton (EFW <1 pc, normal vascular flows) was diagnosed at 32 weeks of gestation. Cesarean section was performed in 35 weeks because of decelerations in CTG. Female fetus was born weighing 1880 grams and 10 points of Apgar score.

Active IBD during pregnancy, treated by steroids can be associated with increased risk of adverse outcomes, such as preterm labour, fetal growth restriction, which confirms our clinical case. Active phase of IBD can be successfully treated during pregnancy without necessary of performing an immediate cesarean section as a one way of treatment.

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Transvaginal hysterectomy as the best choice of operational technique

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Introduction: Hysterectomy is the most frequently performed surgery in gynecology after caesarean section. Transvaginal hysterectomy is referred to as minimally invasive procedure – it does not cause such trauma to the abdominal wall as hysterectomy performed by laparotomy, thus contributing to faster recovery and shorter stay of the patient in the hospital.

Research objectives: In the Department of Gynecology and Obstetrics with the Sub-Department of Oncological Gynecology, Pediatric and Adolescent Gynecology, removal to the uterus through the vagina is the most frequently chosen method of hysterectomy for non-oncological reasons. The aim of the study is to evaluate the surgical technique, which is transvaginal hysterectomy, in terms of the preferred method when choosing which way to remove the uterus.

Material and methods: This retrospective research involved patients who underwent transvaginal hysterectomy.

Results: Over the years, we have noted a significant increase in the number of transvaginal hysterectomies. In 2022, 121 such operations were performed, which constitutes 45,8 % of all hysterectomies performed in our center for non-oncological reasons. For comparison, in 2014, 8 transvaginal hysterectomies were performed in our department, which accounted 4,8 % of all hysterectomies for non-oncological reasons. The average duration of operations in 2022 was 33 minutes. The average stay of patients in our ward after this type of surgery in 2022 is 3,6 days (usually 3 to 4 days of total stay in the ward).

Conclusions: Transvaginal hystrectomy in our center is characterized by a short operation time and stay in the ward, low consumption of painkillers, and thus a low total cost of treatment. Among minimally invasive surgeries, transvaginal hysterectomy is the preferred method and should be the approach of choice.

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Usability of blood morphology in diagnostics of ovarian cancer

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Introduction: It has been reported that the levels of neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) might be correlated with ovarian cancer (OC) staging and useful in predicting OC histotype. Information on these parameters is usually obtained during routine diagnostics.

Aim **of the study:** The study aimed to demonstrate the correlations between levels of carcinoma antigen-125 (CA-125), staging, histological type and blood parameters and assess their usefulness in diagnostics of OC.

Methodology: The study consisted of patients diagnosed with primary OC admitted to the University Oncology Center in Białystok. We measured the correlation between CA-125 levels, histological type, FIGO staging and blood parameters. Statistical analysis was performed with Shapiro-Wilk, Mann-Whitney U test and Spearman *rho* correlation analysis using IBM SPSS Statistics 26. Statistical significance level was set at 0,05.

Results: A group of 63 patients (median age 62,5) participated in our study. Patients diagnosed with serous OC (n = 50) had significantly higher CA-125 levels (p = 0,016) compared to those with non-serous histotype (n = 13). No correlation was observed between OC histotypes and morphotic parameters except higher red blood cells (RBC) in the serous group (p = 0,029). Positive correlation was described between CA-125 concentration and platelets level (p = 0,015) and PLR (p = 0,003). Insignificant, though recognizable tendency was observed between CA-125 levels and NLR (p = 0,053). There was also a positive relation between FIGO grade and CA-125 levels (p = 0,003). No correlation was observed between staging and concentration of blood morphotic elements.

Conclusion: It has been confirmed that CA-125 is a crucial element in OC diagnostics with regard to its histotype and staging. The role of blood morphotic elements in OC diagnostics and prediction of staging needs to be further reviewed to be more exploitable in the future.

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Concordance of standard hematoxylin and eosin staining and ck-19 immunohistochemistry assay in detection of metastases in sentinel lymph nodes in endometrial cancer

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Introduction: A sentinel lymph node biopsy is a standard approach in patients with endometrial cancer. Apart from Hematoxylin and Eosin staining one of the methods to detect the metastases is cytokeratin immunohistochemistry assay.

Objective: To evaluate the concordance between standard histological examination with Hematoxylin and Eosin versus i CK-19 immunohistochemistry assay to detection metastases in sentinel lymph nodes in patients with endometrial cancer.

Methods: 88 patients with endometrial cancer (43 stage I, 16 stage II, 29 stage III) were enrolled in the study. All patients underwent a laparoscopic hysterectomy with sentinel lymph node biopsy using indocyanin green. 195 dissected nodes were examined by the standard histopathology Hematoxylin and Eosin staining and CK-19 immunohistochemistry (CK-19).

Results: Among 194 examined nodes evaluated by a standard histological Hematoxylin and Eosin staining examination the metastases were detected in 7 nodes (3.6 %). In all the 7 nodes CK-19 reaction was positive (100%).

In 187 nodes the Hematoxylin and Eosin staining did not reveal the metastases while the CK-19 was positive for micrometastasis in 3 nodes (1.6 %). That resulted in upstage of FIGO in 3 cases.

The concordance rate between Hematoxylin and Eosin staining and the CK-19 immunohistochemistry in endometrial cancer was 98.4 %

Conclusions: CK-19 immunohistochemistry assay showed higher detection rate of metastases in sentinel lymph nodes compared to standard Hematoxylin and Eosin staining and should be a gold standard in endometrial cancer staging.

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Vitamin d-binding protein (VDBP) and lactoferrin (LF) in plasma and peritoneal fluid (PF) in the diagnosis of endometriosis

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Aim: Biochemical parameters and their interrelationships in plasma and peritoneal fluid (PF) may facilitate understanding of biological processes associated with endometriosis. Selection of vitamin D binding protein (VDBP) and lactoferrin (LF) is based on their characteristic properties and association with inflammatory processes. The aim of this study was to assess the concentrations and correlations of VDBP and LF in plasma and PF in order to investigate systemic and local pathology associated with endometriosis.

Methods: VDBP and LF concentrations were determined simultaneously in plasma and PF in 95 women with suspected endometriosis (59 with endometriosis and 36 without) using ELISA.

Results: There were no differences ($p > 0.05$) in plasma and PF concentrations of VDBP and LF between women with and without endometriosis. In women with endometriosis there was a correlation between plasma and PF VDBP ($r = 0.821$, $p = 0.0001$), but no correlation ($r = 0.049$, $p = 0.714$) between LF in plasma and PF. In plasma of women with endometriosis LF correlated weakly with VDBP ($r = -0.236$, $p = 0.0072$) whereas in PF, the correlation of LF and VDBP was stronger ($r = 0.399$, $p = 0.002$). Women with endometriosis with lower plasma VDBP (< 1 000 μg/ml) had a negative correlation of VDBP *vs* LF ($r = -0.400$, $p = 0.029$) in plasma, while with a higher plasma VDBP range (> 1 000 μg/ml) a positive correlation ($r = 0.416$, $p = 0.022$) in PF was observed.

Conclusions: Associations between VDBP and LF in plasma and PF suggests the possibility of using these parameters in the diagnosis of endometriosis.The effect of low and high plasma VDBP concentrations on the different directions of interdependence between VDBP and LF in plasma and PF indicates active participation of these proteins in the systemic and local regulation of endometriosis-associated pathological processes.

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Overview of patients with ohvira syndrome: diagnosis delay, misdiagnosis, and errors in management

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Obstructed hemivagina and ipsilateral renal anomaly (OHVIRA) syndrome, a rare congenital disorder, is estimated to occur in 1 out of 1000000 people. The OHVIRA is usually associated with uterine malformations; its symptoms include abdominal pain correlated with menstruation.

We aim to identify the difficulties and errors in managing OHVIRA syndrome, including the delay of diagnosis, incorrect diagnosis, and inadequate surgical interventions.

A retrospective cohort study was performed with 40 patients with OHVIRA presented for second-hand diagnosis by expert examination with 2D/3D ultrasound and/or treatment between 2014-2022 in Krakow, Poland, and Craiova, Romania. The data was collected via medical history, ultrasound datasets, and face-to-face interviews. The incorrect diagnosis was defined as the lack of recognition of obstructed hemivagina. The incorrect surgery was considered a surgical intervention that did not cover vaginal septum resection.

The patients included in the study were aged 14-50 years (median: 26.5; mean: 28.13). The median age of menarche was 12.5 years (mean: 11.74). 75% of patients did not report any pain associated with their first menstruation. Until adequate diagnosis, pain associated with OHVIRA was experienced by 81.82% of the patients. The mean time from menarche to final diagnosis was 11.9 years (0-36 years, median: 12 years). 44.44% of women listed pain as their primary motivation to consult a specialist. We found inadequate surgery history in 18/40 (45%) cases.

The time to diagnosis, reaching a median of 12 years, significantly exceeds the international standards for rare diseases. The reported diagnosis delay and errors in management represent the need for additional training regarding the nature and symptoms of the disease, as well as the scarcity of screening methods in vulnerable populations. Non-uncommon errors in treatment may indicate that centralization of management should be considered.

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Early complications of laparoscopic repair of uterine scar niche after cesarean section

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Introduction: Laparoscopy is one of the approaches of repairing the cesarean section diverticulum, besides laparotomy and the transvaginal access. The endoscopic method provides better access to the operated site, high precision of reconstruction and reduced traumatization of abdominal wall. However, this method is limited by the demanding laparoscopic suturing.

The aim of the study was to assess early perioperative complications after laparoscopic uterine cesarean scar repair.

Methods: The analysis included 127 patients undergoing laparoscopic surgery due to caesarean section defect, in whom a residual muscle thickness of <2.5 mm was found during qualification (hystersonography), and who declared reproductive plans. Complications were assessed according to the Clavien-Dindo scale, yet for the overall incidence assessment those classified at grade 2 or more were analyzed.

Results: Grade 4 early complications were reported in 3.9% of patients: in 2 iatrogenic bladder injury (1.6% of operated patients), in 2 (1.6%) bleeding from the uterine vessel branches, in 1 (0.8%) incision of the anterior vaginal wall during the dissection of the bladder from the uterus and the anterior wall of the vagina.

Early stage 2 complications were reported in 12.6% of patients: 2 (1.6%) severe lower abdominal pain with symptoms of incipient surgical site infection, 1 (0.8%) infection of the navel trocar wound, 1 (1.6%) hematoma between the uterus and bladder, 12 (9.4%) had moderate anemia requiring pharmacotherapy (only 2 had a normal hemoglobin value at baseline). There was no conversion to laparotomy. 7 days after the procedure there was no early scar diverticulum.

Conclusions: The risk of surgery mainly results from complications of the operated site – especially adherence of the bladder with the anterior wall of the uterus and is comparable to TLH. The risk of infection is lower than in laparotomy procedures.

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Corin—the early marker of preeclampsia in pregestational diabetes mellitus

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Preeclampsia (PE) is one of the leading causes of mortality and morbidity in pregnant women. Pregestational diabetes (PGDM) patients are prone to vascular complications and preeclampsia, whereas vascular exposure to hyperglycemia induces inflammation, vascular remodeling, and arterial stiffness. Corin is a serine protease, converting inactive pro-atrial natriuretic peptide (pro-ANP) into an active form. It also promotes salt and water excretion by activating atrial natriuretic peptide (ANP), and significantly increases trophoblast invasion. The study aimed to determine whether corin may be a predictor of PE in a high-risk group—women with long-term PGDM. The nested case-control prospective study involved 63 patients with long-term pregestational type 1 diabetes (PGDM). In total, 17 patients developed preeclampsia (the study group), whereas 43 patients without PE constituted the control group. To assess corin concentration, blood samples were collected at two time points: between 18th–22nd week of gestation and 28th–32nd week of gestation. PE patients presented significantly higher mid-gestation corin levels, urine protein loss in each trimester, serum creatinine in the third trimester, and lower creatinine clearance in the third trimester. The results of our study indicate that serum corin assessment may play a role in predicting preeclampsia. Thus, it may be included in the PE risk calculator, initially in high-risk groups, such as patients with PGDM.

Keywords: corin; preeclampsia; pregestational diabetes

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Reference values of fetal ultrasound biometry in Lithuania and their comparison with international charts

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Introduction and aims of the study: The data evaluation of fetal biometry depends on reference charts of fetal biometric measurements, because fetal size varies among different countries and ethnic groups.

The aim of the study was to construct a reference range for the Lithuanian population for fetal biparietal diameter (BPD), occipitofrontal diameter (OFD), head circumference (HC), abdominal circumference (AC) and femur length (FL) and to compare them with current international reference values.

Methods: A prospective cross-sectional study was carried out in secondary referral centres Vilnius University Hospital Santariškių Klinikos Centro Affiliate in 2008–2009 and Vilnius Maternity Hospital in 2009–2014. The fetal biometry of 556 fetuses between 12 and 42 weeks gestation was performed. BPD, OFD, HC, AC and FL were measured. The data were collected and the analysis was performed using statistical programs MS Excel, SPSS and Matlab. Different regression models were fit-

ted to calculate the mean and standard deviation at each gestational age for each parameter. The results were compared with the charts from the international study INTERGROWTH-21.

Results: The biometric measurements of HC, BPD, OFD as well as AC and FL were performed for 556 fetuses. The centile charts, tables and regression formulae of the biometric parameters were constructed. The comparison of our charts with those of study INTERGROWTH-21 revealed no significant differences of HC and AC centiles. FL values, especially in late pregnancy, were significantly smaller in the INTERGROWTH-21 study compared to our charts.

Conclusions: We have constructed and presented centile charts, tables and regression formulae for fetal biometry for the Lithuanian population. The significant differences between our centile charts and those from INTERGROWTH-21 imply the necessity to have local standards of fetal biometry.

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Are expectant mothers sufficiently involved in the decision-making process regarding induction of labour? A European survey

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Introduction and aims: Rates of induction of labour (IoL) are rising and there is increasing awareness of the importance of taking into account women's preferences regarding how they will be induced. However, evidence suggests that women currently do not feel sufficiently involved in the decision-making process. This study evaluated women's experience with IoL prior to giving birth, focussing on their interaction with healthcare professionals, the level of knowledge they had before IoL and the kind of information they received.

Methods: An online questionnaire was carried out in Austria, France, Germany, the Netherlands and Sweden. Respondents were recruited through social media platforms and included if they were aged 18–44 years, had IoL and a singleton birth ≤8 weeks ago.

Results: Of the 3800 women who started the questionnaire, 350 (9%) met the inclusion criteria and completed it. One-third of women did not know what to expect from IoL and 49% felt the experience differed from their expectations. Over a third (36%) disagreed that IoL methods were discussed thoroughly with them, 41% disagreed that they had a full understanding of the various methods and 51% researched additional information by themselves. The majority (65%) did not feel they were fully in charge of choosing the IoL method, only 56% felt satisfied with the medical support they had received, and 36% stated that medical support/communication could have been improved. Those who did not feel fully informed were more likely to state they did not have a full understanding of IoL options and felt less involved in the final decision making.

Conclusions: Despite the inherent risk of a selection bias, many women do not seem to know what to expect from IoL due to the lack of information. Providing more detailed and timely information may allow for a more informed and collaborative decision-making process.

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Assessment of fetal head station with transperineal ultrasound: automatic approach versus expert operator evaluation

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Introduction and aims of the study: The correct evaluation of foetal head station (FHS) is crucial in labour management, as inaccurate assessment can increase the risk of maternal and foetal complications.

The use of foetal ultrasound to assess FHS is growing, whereas the error rate for the evaluation of FHS with digital palpation ranges from 20% to 70%. This study aimed at investigating the performance of an algorithm for the automatic assessment of FHS on transperineal ultrasound (TPU) images during the second stage of labour, comparing the algorithm outcome with the evaluation made by an expert gynaecologist.

Methods: Twenty-seven pregnant women in the second stage of labour, with foetuses in cephalic presentation, underwent TPU examination. In total 42 sonographic acquisitions were performed at different FHS. The FHS was measured on TPU images with two methods: by an expert gynaecologist (gold standard) from progression angle, following ISUOG guidelines, and by the algorithm running on a computer. The algorithm was designed to recognize the anatomic landmarks of pubic symphysis and foetal skull and measure the FHS.

The performance and accuracy of measurements were assessed through the Spearman's ρ, root mean square error and Bland-Altman analysis.

Results: A strong correlation between the algorithm measurements and the gold standard was found (Spearman's $\rho = 0.953$, $p < 0.001$). Moreover, the algorithm results showed a low root mean square error (RMSE = 0.38). The Bland-Altman plot showed a bias very close to zero, indicating that the accuracy of FHS estimation was independent of the measured value.

Conclusions: The proposed algorithm can evaluate the FHS on TPU images with high accuracy and low error rate, providing performance similar to the gold standard. This approach could represent a valid and non-invasive tool to support the clinical staff in labour management, facilitating the prognostication of the delivery mode.

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Successful external cephalic version reduces caesarean section rate

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Introduction: The caesarean section (CS) rate increases worldwide. Latest data shows that 21.1% of women gave birth by CS worldwide. Projections show that by 2030, 28.5% of women worldwide will give birth by CS.

At population level, caesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates.

Breech presentation complicates 3–4% of term deliveries. The number of women undergoing vaginal breech birth decreased after publication of the Term Breech Trial. Planned vaginal breech delivery remains rare and thus attempts to prevent breech presentation are important.

As recommended by the Polish Society of Gynaecologists and Obstetricians caesarean section should be performed in the case of breech presentation of a live fetus.

In 2016 Royal College of Obstetricians and Gynaecologists stated that an ECV service should be available to all women with a breech presentation at term.

Aim: Influence of successful ECV on reduction of the caesarean section rate.

Methods: All women who underwent an ECV at University Clinical Centre from 2016-2022 were included. ECV was attempted on all consenting women with a breech presentation in the absence of contraindications. Vaginal delivery rates were recorded for successfully turned babies.

Results: External cephalic version (ECV) was offered to 60 patients. 10 patients did not consent to the procedure. ECV was attempted in 50 patients. In 34 patients (68%) ECV was successful. Among the 34 patients with successfully turned babies 20 (59%) delivered vaginally. A successful ECV reduced the rate of caesarean section in the studied group by 40%.

Conclusion: Successful external cephalic version reduces the rate of caesarean section for breech presentation.

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Basic knowledge about the most common cancers

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Introduction: Cancer is a serious and growing social problem. Despite the available information on risk factors, symptoms and complications, public awareness remains limited. The most important source of information about the risk of cancer as part of prevention should be the doctor, and for the younger generation it should be the school.

Objectives: The aim of the study was to check the basic knowledge of women living in Krakow about the most common cancers: cervical cancer and lung cancer, as well as the most known carcinogenic factors.

Methods: A survey was conducted. The questions concerned demographic data to characterize the groups, knowledge about the human papilloma virus (HPV), the possibility of testing this virus, available HPV vaccinations. They were also asked about the influence of smoking and obesity on the risk of cancer. Each woman was also asked whether she had been diagnosed for HPV and whether she had been vaccinated against this virus.

Results: Data were collected from 200 women aged 18 to 60. The patients differed in many aspects: the level of education, from primary to higher, having children, the level of body mass index, admitting to smoking.

Surprisingly unsatisfactory are the results of the obtained data on the knowledge of patients about the HPV virus. The vast majority in all subgroups had heard about the virus, but more than half did not know about the possibility of vaccination against this virus, most did not know that it could cause cancers other than cervical cancer. Many women do not consider obesity to be a disease and most do not associate obesity with the risk of cancer.

Conclusion: There is a great need for better education in the field of cancer knowledge, risk factors and available cancer prevention.

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Laparoscopic uterine preservation and vaginal reconstruction in a patient with uterus didelphys, vaginal agenesis and bilateral vesicoavginal fistulas

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Introduction: Congenital vesicovaginal fistula is a very rare cause of menouria. Histerectomy has been often suggested in such cases, although there are some reports of uterine preservation. We present a rare case of successful laparoscopic treatment of uterus didelphys, distal vaginal agenesis and bilateral vesicovaginal fistulas.

Patients and Methods: A 13-year-old girl was referred because of cyclic lower abdominal pain for 12 months. She presented menouria, adequate puberty stage, and normal 46,XX karyotype. Gynecological exam showed vaginal atresia with a vaginal dimple of 2 cm length. MRI revealed uterus didelphys, left hematosalphinx, hematocolpos below the right uterus with suspected narrow communication to the bladder. Bilateral vesicovaginal fistulas close to the ureteral orifices were confirmed on cystoscopy. Visualisation of right cervix and proximal part of the right vagina was possible by cystoscope through the patent right fistula whereas the left fistula was practically occluded.

Results: Laparoscopic left hemi-hysterectomy and salphingectomy was performed, whereas on the right side vesicovaginal fistula was excised, proximal vagina was pulled through to the dimple and connected with it at the level of the vaginal vestibule. Postoperative recovery was uneventful. Neo-vaginal dilation was started on the 10th postoperative day. The patient has been painless and menstruating regularly from the right uterus since the operation.

Conclusions: Preservation of the uterus should be considered in any case of Mullerian duct anomaly. Surgical treatment must be individualized. However, presented case advocates that a minimally invasive approach is feasible.

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Preeclampsia is caused by impaired placenta – A case report

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Preeclampsia (PE) is a disorder of pregnancy associated with new-onset hypertension combined with proteinuria, renal and liver insufficiency, thrombocytopenia, neurological abnormalities and FGR. It is caused by impaired placentation which leads to imbalance between pro-angiogenic (PlGF) and anti-angiogenic factors (sFlt). PE symptoms are related to endothelial dysfunction caused by among others sFlt-1.

A 30-year-old women was admitted to the Department of Obstetrics and Gynecology, Bielanski Hospital at 22 weeks of gestation of her first pregnancy due to FGR and vaginal bleeding. The US scan revealed EFW 370 g (< 1 pc), absent end-diastolic flow in umbilical arteries and ductus venosus PIV 0.77. The serum sFlt-1/PlGF ratio was 384. Soon the patient developed hypertension (required methyldopa, labetalol and nitrendipine). Due to abnormal CTG she was administered steroids at 24 weeks. In laboratory test increasing transaminases and LDH levels with decreasing PLT were observed. At 26 weeks another vaginal bleeding appeared, and partial abruption was diagnosed. Afterwards the patients became less hypertension treatment was reduced to methyldopa only. sFlt-1/PlGF ratio decreased to 268 and normalization of transaminases, LDH and PLT was observed. At 28 weeks a cesarean section was performed due to repetitive decelerations on CTG. A male newborn weighting 650 g was born with Apgar score 8 in 5th minute of life. pH of umbilical blood was 7,29. Placenta with 500 mL hematoma was delivered. The boy was hospitalized in NICU and discharged home after 118 days in good general condition.

sFlt-1 is released from hypoxic placenta into maternal blood and is related to endothelial damage in PE. As its release is related to the degree of placenta impairment and to the size of surface between placenta and decidua, the abruption decreased sFlt-1 release and eased the course of PE allowing the newborn to be born 6 weeks after PE development.

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Bartter [StQuote] s syndrome as a forgotten cause of polyhydramnios

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Introduction and objectives of the study: Bartter type V syndrome is a rare genetic, X-linked disorder characterised by hypercalciuria that can cause kidney disease, hyponatremia, hypokalaemia, elevated renin and aldosterone levels in the foetus and polyhydramnios.

Methods: A 31-year-old, G2P1A0, was referred to the clinic for a routine second-trimester examination. First-trimester sonography was normal. The first-trimester screening revealed a low risk for trisomy 21, 18, and 13. At 21 weeks of gestation, polyhydramnios was detected. Amniocentesis was proposed to obtain genetic material from the foetus. A molecular karyotype test was ordered, with a normal male result. Due to recurrent incidents of hypoglycaemia in the pregnant woman and suspicion of monogenic diabetes in the father, genetic diagnostics of the causes of carbohydrate metabolism disorders in both patients were performed. After receiving normal results, a reanalysis was ordered towards the causes of polyhydramnios. The test was performed using the NGS technique (next-generation sequencing), and the result was confirmed using the Sanger method.

Results: The pregnant woman and foetus had the c.1386 + 2T > C variant in the *MAGED2* gene responsible for developing Bartter type V syndrome.

Conclusions: Based on the presented case, we prove that genetic diagnosis should support prenatal testing.

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A new method of bowel resection using a single stapler and its comparison with the conventional method of using linear and circular staplers in patients with DIE of the rectosigmoideum – Videopresentation

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Introduction

Endometriosis affecting the gastrointestinal tract is the most common extragenital endometriosis and occurs in about 5-15%. Depending on the size of the rectosigmoid lesion, shaving, discoid excision or segmental resection can be performed. In segmental resection, a linear stapler is normally placed below the nodule on the rectosigmoid colon and separation of the intestinal wall is made. Placement of linear stapler in low locations is practically not possible in the perpendicular diameter, but only diagonally. That is why a second stapler is very often used. This results in two incision lines on the intestine. Anastomosis is then created using a circular stapler, a third incision line. Each incision line carries a risk. Our idea is to use two simple, strictly circularly placed sutures for the resection of the intestine instead of a linear stapler. The intestinal wall is cut in between them, and a circular stapler is used for anastomosis. This leaves only one incision line.The steps of one stapler technique are:

1. 1, Intestinal wall cleansing as in limited segmental resection.
2. 2, Placement of one circular suture just below the DIE nodule. We recommend full thickness (intestinal wall) bites in at least three places.
3. 3, Placement of the second circular stitch approx. 2 cm below the first. Full thickness bites again in three places.
4. 4, Interruption of the intestinal wall is performed using a harmonic scalpel.
5. 5, End-end anastomosis is performed using a circular stapler.
6. 6, Air tightness test of anastomosis.

Material and methods

We compared the length of the operating time, complications during the operation and the need to use the standard method. We evaluated CRP postoperatively, postoperative complications, the need for antibiotic therapy and the length of hospitalization.

Results

In 2020 -2022, we performed 92 types of operations with this type of operation. We compared them with the same amount of patient with classical operation on the bowel. The operating time was about 11 minutes longer than the standard operation with a linear stapler. The values of CRP, febrile, need for long-term antibiotic therapy and postoperative course were comparable using both methods.

In 6 cases, we had to reattach the circular suture when slipping the suture when handling the rectum and the circular stapler. In 2 cases we had to use a linear stapler.

In 4 patients, on the other hand, we preferentially applied ciscular sutures for very low resection 4-6 cm from the anal verge, when there are problems with the angle of the linear stapler with the preserved uterus.

Discussion

The classic method of laparoscopic intestinal resection using linear staplers is a proven and standardly used method. Due to the frequent need to use two linear staplers and one circular stapler, 3 cut lines are

created, ie places of possible leakage. Of course, the price of two linear staplers is also significant compared to one stitch. The disadvantage of using circular sutures is the need to know the technique of laparoscopic suture, usually in the phase of an already tired surgeon after 2 hours of surgery. In our experience, the size of the circular stapler used is necessary for the handling and subsequent reanastomosis of the circular stapler 33.

Conclusion

Regarding perioperative or postoperative complications, both methods are comparable. In the case of low DIE localization on the rectosigmoid, we find this technique easier and safer.

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Myomectomy challenges in masive cervical fibroid

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Introduction

Fibroid is the most common benign tumour arising from the uterus. Only 4% arise from the cervix. In this location, they can obstruct the canal if intra-luminal and present a major surgical challenge if they expand out laterally into the broad ligament.

Case: We present a 28-year-old healthy nulliparous lady with a history of increased frequency ofmicturition and nocturia for 6 months duration. Menstruation was regular and she was onthe oral contraceptive pill for the past year. Examination revealed a distended abdomen, with a mass arising from the pelvis firm to hard in consistency measuring 22 weeks.

Blood profiles were normal. Further imaging investigations included an MRI pelvis showing a fibroid mass measuring 16x22cm arising out of the pelvis in to the upper abdomen, mild hydronephrosis and hydroureter. A CT angiogram to assess the vascularity of the fibroid showed vascular supply mainly by the uterine arteries.

At examination under anaesthesia, the cervix could not be visualized. The hysteroscope was guided to the cervix by hydro colposcopy. The scope passed full length but failed to reach above the internal os. Cystoscopy revealed normal functioning ureters and indentation of the fibroid into the bladder. Attempted stenting of both ureters failed at 10 cm level at the level of the pelvic brim. She was counselled thoroughly, and the decision was made to perform a myomectomy. GNRH (decapeptyl) analogue was administered initially for 3 months prior to surgery.

Intraoperatively at laparotomy, the uterine corpus was displaced cephalad by a massive fibroid that arose on the right side from a base of approximately 5 cm of the cervix and expanded the broad ligament ipsilaterally. The cervical fibroid measuring 25 cm and 1.9kg was excised. The internal iliac arteries were ligated bilaterally. Blood loss was 2 litres ensued. A cell saver system was used intraoperatively. A foley catheter was placed intracervically into the uterine cavity. Her postoperative recovery was uneventful.

Histology confirmed a benign leiomyoma. Normal menstruation resumed within four weeks. Elective caesarean delivery before labour is recommended.

Conclusion: We recommend the importance of careful preoperative assessment of a complicated cervical fibroid prior to scheduling a laparotomy myomectomy. All complicated cases should be referred to a tertiary centre with the presence of a multidisciplinary team, including a radiologist, gynaecology-oncologist, anaesthetists and haematology.

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Fertiwise – Assessment and narrative review of knowledge regarding fertility and fertility preservation among health care professionals (HCPS)

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Introduction and aims of the study: The quantity and quality of oocytes continuously decline throughout the female reproductive period.[1–3] This process, along with advanced maternal age, results in decreased fertility but also increased rates of obstetric and perinatal complications.[4,5] However, there is evidence that women in developed countries delay childbearing and start family planning at higher reproductive ages.[6]

Amongst individuals of different populations and academic backgrounds, divergent beliefs and a lack of knowledge have been reported regarding topics like fertility and motherhood.[7–16] Thus, appropriate counseling by health care professionals (HCPs) is crucial.[17] This study aims to assess and review the knowledge of HCPs regarding fertility and fertility preservation.

Methods: Literature search using scientific databases (e.g. PubMed®). Identification and review of publications relevant to the aim of the study. Analysis of significant findings using a chart.

Results and discussion: Thirteen publications were eligible and relevant to be included in this review. Different populations and samples of HCPs with varying backgrounds and ages were investigated in the included studies. The most significant findings are highlighted in the study chart (Table 1). A large proportion of HCPs overestimated the age when male and female fertility declines. Many HCPs overestimated the success rates of assisted reproductive technologies (ART). Only a small proportion of HCPs counseled patients regarding family planning and elective fertility preservation (EFP) on a regular basis. The results show that there is a significant lack of knowledge regarding fertility and fertility preservation among HCPs, even among those from the specialty of Obstetrics and Gynecology (OB/GYN). More specific education and sensitization for the topic is needed in order to guarantee a sufficient consultation quality, e.g. through specific training or education programs.[18–22]

Conclusions: There is a significant lack of knowledge regarding fertility and fertility preservation among HCPs. More research in this field and education through specific education programs are crucial to guarantee optimal reproductive counseling of patients.

Table 1. Abbreviations: n = number, y = years, OB/GYN = Obstetrics and Gynecology, HCPs = health care professionals, ART = assisted reproductive technology, IVF = in vitro-fertilization, EFP = elective fertility preservation, EF = elective egg freezing, n/a = not available.

Reference	Sample	Participants (n)	Mean age (y)	Significant finding
Hammond et al. 2002[1]	physicians and nurses (OB/GYN)	370	44.3	39% of the respondents indicated that female fertility begins to decline at >40 years of age
Mortensen et al. 2012[2]	Danish female HCPs	863	32.6	50% of women underrated the impact of age on fertility and overestimated success rates of ART
Azhar et al. 2015[3]	female and male HCPs	185	29.0	~20% of respondents were unaware that there was a test available for measuring egg supply
Yu et al. 2016[5]	OB/GYN residents	238	n/a	78.4% of residents overestimated the likelihood of success using ART
Hammarberg et al. 2016[6]	nurses	102	n/a	More than half of respondents overestimated the age when male and female fertility declines
Kudesia et al. 2017[8]	female medical students and OB/GYN trainees	118	25.0	The majority underestimated miscarriage rates and overestimated fecundability of 40-year-old women
Garcia et al. 2017[9]	HCPs	201	42.7	There is a significant lack of knowledge among HCPs regarding female fertility and IVF
Fritz et al. 2018[10]	US physicians (OB/GYN)	784	47.4	Only 27.6% counsel women desiring future childbearing due to social reasons on EFP
Esfandiari et al. 2019[11]	US residents	106	n/a	Only half of female residents reported being comfortable counseling a patient on EF (49.5%)
Roberts et al. 2020[13]	OB-GYN residents	177	n/a	Substantial gaps in knowledge, especially regarding male fertility and success rates of ART
Tsai et al. 2022[15]	US residents	2828	29.8	Median number of correct answers was 2/5 on fertility knowledge and 1/3 on EF knowledge
Kim et al. 2022[16]	female medical staff	171	26.4	Only 47.7% of women answered correctly on the age at which female fertility markedly declines
Grace et al. 2023[17]	HCPs and control group	347	n/a	Overall HCPs did not demonstrate better fertility knowledge in comparison with control group (non-HCPs)

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Evaluation of antioxidant system and oxidative stress in serum of pregnant women with physiological pregnancy and fetal growth restriction

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Physiologically in the body, about 1-5% of O2 is converted to reactive oxygen species (RFT). Under homeostatic conditions, RFTs released in small amounts play the role of mediators and regulators of many cellular processes. Excessive activity of RFTs, especially oxygen radicals, results in a condition called oxidative stress. It plays a significant role in various diseases, undoubtedly including obstetric ones, but to date there are a negligible number of scientific reports describing these phenomena in pregnant women.

The purpose of this study is to evaluate the oxidative system and oxidative stress in peripheral blood serum of patients with physiological and complicated FGR pregnancies.

In 33 pregnant women with FGR and 35 pregnant women with physiological pregnancies, the concentrations or activity of 11 variables that are parameters of the oxidative system in the blood of pregnant women were examined. These included plasma thiol (SH), thiol residues per gram of protein, ceruloplasmin (CER), total antioxidant capacity (TAC), total oxidative status (TOS), lipid peroxides (LPH), superoxide dismutase (SOD) activity, manganese containing mitochondrial superoxide dismutase (MnSOD), copper and zinc containing cytoplasmatic superoxide dismutase (CuZnSOD), lipofuscin (LPS) and malondialdehyde (MDA).

In the group of patients with FGR, compared to the control group, there were statistically significant differences in the following parameters: superoxide dismutase [SOD] activity (16.6976 NU/ml vs. 17.7160 NU/ml; $p = 0.049329$), and manganese containing mitochondrial superoxide dismutase [MnSOD] activity (11.6775 NU/ml vs. 12.4347 NU/ml; $p = 0.035449$).

Superoxide dismutase activity can be a marker of intrauterine fetal growth retardation and neonatal status in women with this complication.

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Impact of pregnancy on breast cancer features and prognosis

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Introduction and aims of the study: pregnancy-associated breast cancer (PABC) (diagnosed during pregnancy or <2 years after pregnancy) affects one in 3000 pregnancies, and its frequency is increasing due to high maternal age. In this study, we evaluated the impact of pregnancy on breast cancer (BC) features and disease-free survival (DFS).

Methods: a retrospective analysis of young women (≤ 45 years) with BC treated between 1995 and 2019 was performed, dividing the study population into three groups: nulliparous, women with PABC and women with BC diagnosed > 2 years since last pregnancy. This last group was further stratified according to the time between pregnancy and BC (2-5 years, 6-10 years and > 10 years). The following variables were analyzed: age at diagnosis, histological features (size of the tumor, histotype, grading, nodal involvement, multifocality, linfovascular invasion, hormone receptor expression, Ki 67 proliferative index, HER2 expression), type of surgery, site of recurrence (local or distant), and patient status at follow-up.

Results: 282 women with BC were included: 108 nulliparous, 40 with PABC and 134 with BC more than two years since the last pregnancy (of which 40 with BC 2-5 years after pregnancy, 59 with BC 6-10 years after pregnancy and 35 with BC > 10 years after pregnancy). Age at diagnosis was younger in nulliparous than in parous women ($p < 0.001$). No significant differences were noticed regarding histological characteristics, type of surgery, and recurrences. At univariate analysis, nodal involvement (OR 2.4; $p = 0.0001$), high tumor grade (OR 2.6; $p = 0.01$), and linfovascular invasion (OR 2.3; $p < 0.05$) but not by pregnancy (OR 0.8; $p = 0.60$) influenced DFS negatively. Multivariate analysis confirmed nodal involvement as the only negative independent prognostic factor for a worse DFS (OR 2.4; $p = 0.0001$).

Conclusions: In our experience, pregnancy is not an independent adverse prognostic factor for DFS.

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Manual therapy - possible method for premenstrual syndrome relief

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Background: Premenstrual Syndrome (PMS) occurs in the luteal phase of the menstrual cycle. PMS is characterized by psychological symptoms (mood swings, feeling sad or angry, motivation decrease) and physical symptoms such as breast tenderness, headache, or muscle pain. Treatment of PMS can be based on exercises, supplementing with vitamins, or hormonal therapy.

The study aimed to assess if manual therapy impacts PMS.

Methods: Thirty-five nulliparous women with no history of pelvic surgical interventions were included in the study. They were divided into group A—manual therapy (n = 20) and group B—non-intervention (n = 15). Manual therapy was conducted on the following muscles: the diaphragm, iliopsoas, thigh abductors, quadratus lumborum, hamstring group, piriformis, tensor fascia late, and pelvic floor. PMS was assessed with the numerical pain rating scale (NPRS), before and after interventions. Depending on the menstrual cycle length, manual therapy was conducted three or four times per cycle. Therapy sessions were conducted weekly for 45 minutes each time.

Results: The median age of the study participants was 23 (22; 24.5). The groups did not differ in terms of age, body mass index (BMI), or duration of the menstrual cycle ($p > 0.05$). In group A, after manual therapy, the severity of PMS significantly decreased from a median of 6.5 to 3 points on the NPRS scale ($p = 0.01$). Among women from group B, baseline and follow-up assessment PMS was 6 points median on the NPRS scale ($p > 0.05$). A statistically significant difference was detected between groups A and B during the baseline and follow-up assessment.

Conclusions: The results of the study suggest that manual therapy may be an effective method in alleviating PMS in young women and can be considered a method of relief. However, due to the small size of the group, the results need to be confirmed in follow-up studies.

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Can the risks associated with uterine fibroids morcellation be prevented?

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Uterine fibroids are symptomatic or asymptomatic, they can be an important cause of abnormal uterine bleeding, pelvic pain or infertility. Some of presumed leiomyomas had unexpected cancers. In this study, we evaluate the safety and efficacy of laparoscopic myomectomy, LSH, TLH and laparotomy in management of uterine fibroids and risk of uterine sarcoma. A retrospective observational study was conducted. We examined all clinical charts of women who had undergone laparoscopy and laparotomy due to uterine bleeding or uterine fibroids. We performed an analysis of 1016 patients who had undergone laparoscopic supracervical hysterectomy (LSH), total laparoscopic hysterectomy (TLH), total hysterectomy (TH) or myomectomy (LM) during 4 years. The clinical indications for surgery, procedure complications, symptoms resolution, comparison between ultrasound findings and outcomes were evaluated. A total of 777 laparoscopy procedures were performer (381 LSH, 158 TLH, 238 LM) and 239 laparotomy (201 hysterectomy, 38 myomectomy). Approximately all of the histological studies confirmed leiomyomas. Unexpected malignancies were detected in 3 of 1016 patients (0.29%). In all cases, the malignancy proved to be a sarcoma and was detected during TLH (1 case, 0,12% of laparoscopy) and TH (2 cases, 0,83% of laparotomy). No cases of sarcoma were found during laparoscopic morcellation. Preoperative examination, discussion about the risks and complications associated with morcellation, as well as research on the contraindications to the use of morcellation are the crucial points. Laparoscopy was an effective procedure in the management of analysed cases with a significative reduction of symptoms. All patients with sarcomas were older than 38 years and the most common risk factor was the appearance of a huge solid tumor of the uterus. The patients underwent secondary laparotomy for complete oncological staging. In the case of morcellation of uterine fibroids, the risk of an undiagnosed uterine sarcoma is estimated to be between 1 in 278 to 1 in 1960 women. In the analysed laparoscopy group we did not find any of this complication.

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Prophylactic and opportunistic salpingectomy in a central-eastern European country – Club 35 young gynaecologists survey study results

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Introduction and aims of the study: According to the available data salpingectomy allows removal of carcinogenesis favourable environment with maintenance of ovarian hormonal function. The aim of the study was to examine prevalence and attitudes towards preventative surgical technique in decreasing the risk of ovarian cancer in Poland.

Methods: It was a cross-sectional study performed by means of an online questionnaire regarding different aspects of prophylactic and opportunistic salpingectomy. Invitations were sent via e-mail to members of the Polish Society of Gynaecologists and Obstetricians and to participants of major Polish gynaecological congresses. Altogether 256 answers were collected in 2018-2019 from gynaecologists practicing in Poland.

Results: 93% of respondents would offer opportunistic salpingectomy to patients undergoing hysterectomy. However, less than 40% would offer this procedure to premenopausal women with realized reproductive plans undergoing benign ovarian cyst enucleation. In case of premenopausal patients with BRCA1 or 2 gene mutations and completed reproductive plans, 62% of respondents would recommend bilateral salpingo-oophorectomy and 4% would offer salpingectomy alone. The main reported reason for not performing prophylactic salpingectomy in premenopausal women were possible legal consequences associated with permanent sterilization (71%). According to 95% of the surveyed official national guidelines on prophylactic and opportunistic salpingectomy would be helpful in everyday practice. 90% of respondents stated that legal aspects of the procedure should be adjusted.

Conclusion: Practices regarding prophylactic and opportunistic salpingectomy are not unified and vary among centres in Poland. Discussion on this topic within scientific societies could help in standardisation of the procedure.

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Investigation of vulvar biopsy results in patients with vulvar clinical complaints

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Objective: Vulvar biopsy is a method used in the diagnosis of benign and malign pathologies of the vulva. In this study we aim to compare clinical, demographic and pathologic results of patients who presented in our clinic with vulvar complaints.

Method: Patients who presented with itch and lump of the vulva and who received vulvar biopsy between January 2012 and December 2018 were evaluated retrospectively. Their pathology results were obtained from our database. Patients' age, gravida, birth type, menstruation status, menopausal status, comorbidities, presenting symptoms, pathology results of vulva biopsies, treatment types were obtained using our database retrospectively.

Results: 157 patients were included. A malignity rate of 13.3% was calculated. Of these malignities 12.7% were squamous cell carcinoma. The mean age of patients with malignancy was calculated to be 67.86 and the mean age of patients with benign results was 46.34. Condyloma acuminata (%19.1) was the most frequent pathological diagnosis in benign cases. When itching at vulvar area was accompanied by a vulvar lump, malignity risk was calculated to be higher ($P < 0.001$).

Conclusion: Malignity rate was calculated to be more than 1 out of 10 patients. Especially elderly, postmenopausal women with comorbidities presenting with vulvar complaints should receive vulvar biopsies.

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A case of baby with cleft lip and palate from mother with bicornuate uterus. are anatomical fusion anomalies inherited from mother to baby or a coincidence?

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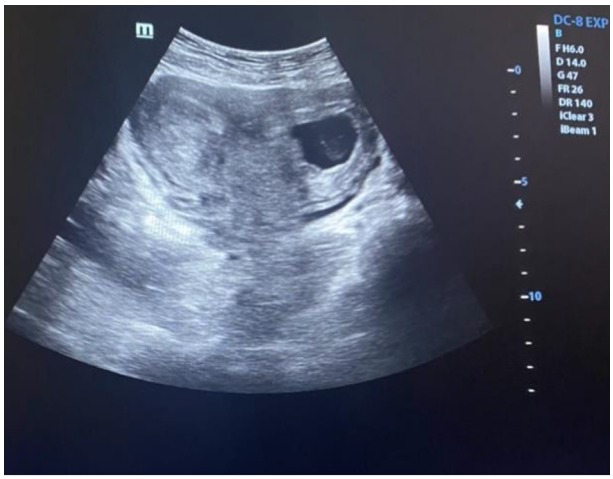
Introduction and aims of the study: Complete closure of lip is completed by 35th days postconception while palatal closure is accomplished until 58 days. Cleft lip and palate occur when the tissue that forms the lip and the roof of the mouth doesn't join properly. Cleft lip occurs with palate anomalies in 80% cases. While these orofacial birth defects are common, their cause remains largely unknown. Genetic changes as a result of the mother's diet, smoking, obesity or medication are thought to play a role, but the exact genetic mechanism is not fully understood. They can be isolated or with a part of a syndrome. The case showed the co- occurence of fetal oropharynegeal anomaly with maternal uterine fusion anomaly and lead to search any possible inheritence.

Methods: The patient applied with missed abortus in one cavity and bicornuate uterus was diagnosed (Fig. 1). She was informed and septum operation was recommended but she did not accept the procedure. Following the spontaneous miscarriage, the patient recame in 34th week pregnancy with active uterine contractions and cervical dilatation. The fetus was in breech presentation and anhydramniotic. In the operation, the uterus was seen as heart shape and also the endometrial cavity was split into 2 by a midline septum (Fig. 2). The baby was with cleft lip and palate (Fig. 3). There wasn't any history about cleft lip and palate in other children or family members.

Discussion: Uterine fusion anomalies can cause preterm labor, malpresentation, recurrent pregnancy loss. While the obstetrics complications are common with uterine anomalies, to see this fetal anomaly marked a question about inheritence. Cleft lip-palate can occur with syndromes but there is not efficient data to show inheritence from mother.

Conclusions: The case showed that more randomised trials are required to understand any genetical basis between anotomical fusion anomalies inheritence.

Fig. 1. The patient's first application to our clinic was with missed abortus in the right uterine cavity.



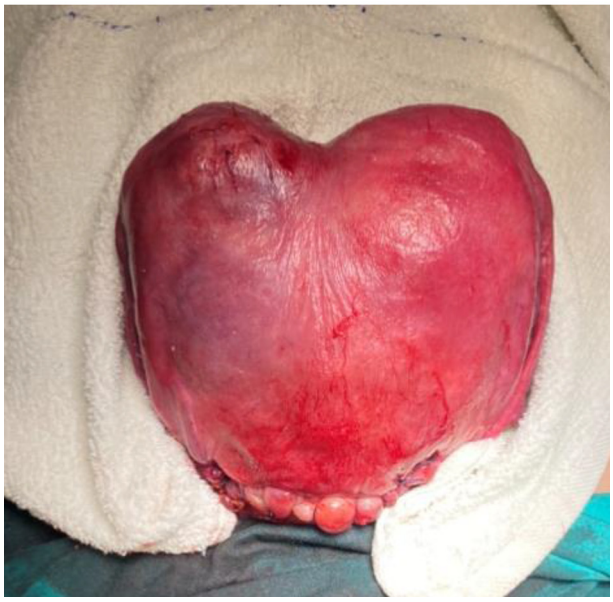


Fig. 2. The heart appearence of the uterus after closing the uterine incision in caesarean

Fig. 3. The demonstration of cleft lip and palate on the newborn baby

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Does uterine arteries flow add value to CPR in the prediction of cesarean section for intrapartum hypoxia? - Secondary analysis of polish ratio37 group

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Introduction and aims of study: Intrapartum hypoxia is a common complication of uterine contractions. Despite its importance and frequency, there are no effective methods of prediction of intrapartum hypoxia. Our study aimed to compare CPR to CPR + UtA flow in the prediction of cesarean section for suspected intrapartum hypoxia

Methods: Patients included in Ratio 37 trial were randomized and examined according to the study protocol, but additionally uterine arteries flow was assessed. The results of the UtA flow examination did not influence proceedings according to the study protocol. A total of 998 patients were included in the cohort. A general linear model was used to determine the potential usefulness of CPR and CPR + UtA as predictors of cesarean section for suspected intrapartum hypoxia.

Results: Mean CRP was 1,80 in the hypoxia group and 1,90 in the no-hypoxia group (p = 0,0354). Uterine arteries flow did not change the model prediction power. CPR + UtA did not show statistically significant correlation with any of the secondary outcomes.

Conclusions: Although CPR was significantly lower in the hypoxia group, the difference was not sufficient to build a clinically effective prediction model. The addition of uterine flow did not change the model prediction power.

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Using cluster analysis to determine different sonographic phenotypes of fetal complex ventral wall malformations

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Introduction: Complex malformations of the fetal ventral wall are usually associated with various structural anomalies and different phenotypes such as limb body wall complex, body stalk anomaly and OEIS syndrome have been previously described. However, due to overlapping features the definitions have often been used interchangeably causing confusion between the authors. As most of the data derive from post-mortem examinations they do not easily apply in the prenatal period. A classification based on sonographic features is lacking. Cluster analysis is a statistical method dividing observations into groups based on mathematical distances between them.

Objectivies: To determine sonographic phenotypes of complex malformations of the fetal ventral wall using agglomerative, hierarchical clustering.

Methods: A retrospective analysis of fetuses with complex malformations of the ventral wall diagnosed between 1997 and 2021 in our tertiary referral ultrasound department. Simple omphalocoele and gastroschisis with or without additional anomalies were excluded. Data was manually verified and observations were grouped into a coherent set of features based on medical expertise. Cluster analysis was used to determine different phenotypes based on sonographic features.

Results: The study group consisted of 160 fetuses. The mean maternal age was 28 years (SD 5.9 years). The median gestational age at diagnosis was 14 weeks. Ventral wall defect comprised abdominal wall in 150 cases, thoracic wall in 42 cases and pelvic wall in 28 cases. Additional anomalies included spine(n = 110), neural tube (n = 58), limbs (n = 45) and other abnormalities (n = 38). Using clustering we identified 5 groups with following predominant discriminative sonographic features: kyphoscoliosis, pelvic wall defect, thoracic wall defect, limb anomalies, neural tube defect. The silhouette score was 0.328.

Conclusions: Complex malformations of the fetal ventral wall present with a wide spectrum of additional anomalies. Cluster analysis enabled an objective classification of observed fetal malformations into different sonographic phenotypes.

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Early assessment of pelvic floor complaints in patients after acellular dermal matrix transplantation in the treatment of prolapse

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Introduction and research objectives: The aim of our study was to determine the clinical effects of using acellular dermal matrix (ADM) in the treatment of prolapse. The desire to find a new treatment method results from the incomplete effectiveness of the currently available surgical options. Operations with synthetic materials have numerous side effects, such as infections, vaginal erosion, or dyspareunia, while native tissue operations are often not durable enough.

Materials and Methods: Nine patients with prolapse of the reproductive organ were operated in Chair and Department of Gynecology, Obstetrics and Gynecological Oncology in Katowice adequate to the type of defect, using ADM as a support material. In seven patients, the matrices were implanted as the double TOT; in two, as a six-point fixation mesh. Preoperatively and one month after surgery, genital prolapse was assessed using the Pelvic Organ Prolapse Quantification (POP-Q) System, as well as a general medical history and assessment of complaints using the short form of the pelvic floor distress inventory questionnaire (PFDIQ-SF20).

Results: Nine patients, ages 39 to 71 (mean: 63), underwent surgical treatment. Every patient had at least one vaginal delivery (mean of two). None of them had a cesarean section. Prolapse assessed as POP-Q 3 occurred in four patients, POP-Q 2 in five patients. The mean PFDIQ-SF20 score before surgery was 67. There were no major complications during or after surgery. One patient developed a vaginal fungal infection and an allergic reaction to intradermal sutures. After the operation, the ailments were reduced by an average of 58 points, and five patients did not report any complaints.

Conclusions: ADM seems to be a material worthy of interest for use in gynecological surgery. Initial reports on its effectiveness and safety profile are very optimistic.

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L1cam expression in endometrial cancer

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Introduction: Endometrial cancer (EC) the most common cancer of the female genital tract, is usually diagnosed at an early stage with uterine-confined disease and an overall favorable prognosis. However up to 20% of EC manifest as aggressive high-grade and deeply invasive lesions at substantial risk of recurrence and death. L1CAM is a molecule involved in the dynamics of cell adhesion.

The aim of the study: The aim of the study was to assess the prognostic significance of L1CAM expression in different types of EC and to study the association between L1CAM expression and particular clinical features in EC patients.

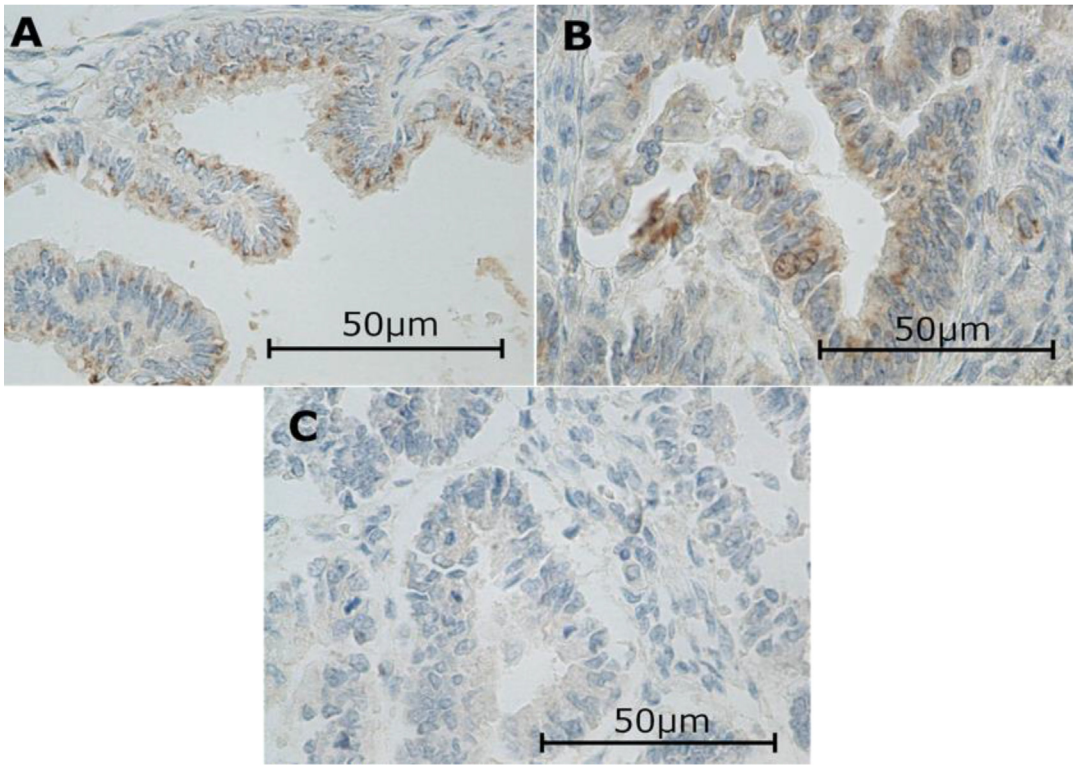

Figure 1. Levels of L1CAM expression in endometrial cancer: strong (A), medium (B) and weak (C). Primary objective magnification 40x

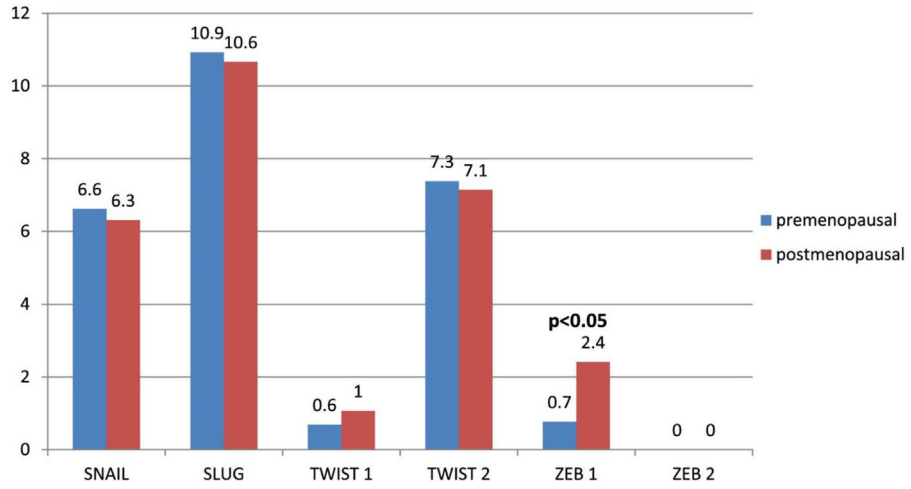

Fig. 1 Immunoexpression of the EMT transcription factors stratified according to the menopausal status of the study patients. The only statistically significant difference was found for ZEB 1 ($p < 0.05$); the expression of other transcription factors did not differ significantly between premenopausal and postmenopausal patients

Material and methods: The study included 155 patients with EC, diagnosed, and treated at the Department of Obstetrics and Gynecology, Nicolaus Copernicus University, Collegium Medicum in Bydgoszcz (Poland). All patients underwent surgical treatment: total hysterectomy and lymphadenectomy. Adjuvant treatment consisted of radiotherapy, administered in line with the guidelines of Polish Oncological Society. Immunohistochemical studies were performed on archival formalin-fixed, paraffin-embedded (FFPE) tissue specimens (Figure 1). The effect of grouping clinicopathological variables on the immunoexpression of studied protein was analyzed with the Mann-Whitney U-test.

Results: Positive expression of L1CAM was detected among 53,5% patients with EC including 49.5% (N = 57) patients with type I and 65% (N = 26) with type II EC. The expression of L1CAM didn't differ significantly depending on clinical FIGO stage, grade, LVSI, myometrial invasion, cervical involvement, infiltration of adnexa, lymph node metastases and distant metastases in examined group.

Conclusions: Positive expression of L1CAM was detected among majority of EC patients especially in type II EC. In examined groups L1CAM expression in the primary tumor has a limited usefulness in stratifying EC patients.

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Expression of selected epithelial–mesenchymal transition (EMT) transcription factors in serous borderline ovarian tumors and type I ovarian cancers

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Introduction: Epithelial ovarian neoplasms are a heterogeneous group including tumor subsets with distinct clinicopathologic and molecularfeatures. The transformation of borderline ovarian tumors into an invasive neoplasm is associated with an array of molecular changes

The aim of the study: The aim of this study was to analyze the expression of transcription factors involved in EMT: SNAIL, SLUG, TWIST 1, TWIST 2, ZEB 1, and ZEB 2 in borderline tumors and type I ovarian cancers.

Material and methods: The study included tissue specimens from 42 patients with histopathologically verified ovarian masses. The expressions for EMT transcription factors were scored based on the nuclear and/or cytoplasmic staining.

Results: The proportions of ovarian tumors with the immunoexpression of the EMT transcription factors were 85.7% for SNAIL, 100% for SLUG, 9.5% for TWIST 1, 95.2% for TWIST 2, 23.8% for ZEB 1, and 0% for ZEB 2 Fig. 1).

Conclusions: Our findings obtained in the two groups of tumors which shared some etiopathogenetic pathways imply that the expression of the EMT transcription factors may be activated at early stages of the EMT, and thus these factors may play a pivotal role in the development of serous borderline ovarian tumors and type I ovarian cancer.

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Ultrasound foetal morphology scan learning

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Introduction: In Slovenia, every gynaecologist/obstetrician has to be proficient in performing a 2nd trimester foetal morphology scan; therefore two months of ultrasound (US) rotation in perinatology unit is part of the core curriculum. Training takes place in the clinical setting, under supervision of specialist doctors.

We have performed a study to evaluate basic simulation ultrasound training, during the process of renovation of the training curriculum. We aimed to observe trainee's evaluation of learning possibilities, their skills and knowledge. Furthermore, we analysed a correlation of trainee's self-assessment with independent assessment of their performance.

Methods: in an observational study, 22 trainees completed a survey regarding their perception of US skills learning and knowledge before participating in the educational module for 2nd trimester scan on US simulator. Next, the participants performed a scan on pregnant woman and the pictures of typical views with measurements were taken. Three independent specialists evaluated the scans and the correlation with the survey results was made.

Results and discussion: of the 22 participants, 64% have already completed the ultrasound rotation. Most of participants feel proficient in evaluating foetal biometry (HC and BIP 77%, AC 64%, FL 86%). However, they do not feel qualified to evaluate head morphology in 55 %, heart morphology in 77%. They believe they cannot maintain the sufficient level of skill throughout training in 91%. Most believe an ultrasound simulator is vital to learn US skills before clinical practice (82%) and to maintain the level of skills gained once you shift to other training sites (86%).

Conclusions: our study shows that ultrasound simulator was well accepted among our trainees as a tool in educational module for basic 2nd trimester morphology scan and they desire to have one available at all time in order to regularly practice and develop ultrasound skills.

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Breast cancer in woman older than 85 years. Is surgery an option?

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Introduction: Breast cancer is the most common cancer in women, with an incidence that rises dramatically with age. The treatment in women over the age of 85 remains a complex issue due to comorbidities, therapy-related toxicities, and the lack of evidence-based data in this population, leading to both overtreatment and under treatment. The aim of this study was to describe the outcomes of surgical treatment and relative survival of elderly patients.

Methods: Retrospective analysis of all woman aged 85 years or older who underwent oncological breast surgery in our Senology Unit from January 2018 to August 2022. 23 cases were analysed for medical and gynaecological antecedents, tumor characteristics, treatment, surgical complication and follow-up.

Results: The study included 23 women aged 85 years or older, with a median age of 87 years, with a lower limit of 85 and an upper limit of 92. Most were multiparous (n = 15, 65.1%), had a mean age at menopause of 50.8 ± 3.1 years. As for comorbidities, 97.5% had arterial hypertension, 39.1% other cardiovascular complications and 17.4% Diabetes Mellitus.

As for the histology of the tumor in biopsy, the majority showed invasive ductal carcinoma (60.9%; n = 14), grade II (39.1%, n = 9), positive estrogen receptors (65.2%, n = 15) and positive progesterone receptors (60.9%, n = 14). Only 3 cases in the sample were HER2 positive. About TNM staging, most were clinically classified as T2 (30.4%; n = 7) and N0 (56%; n = 13).

Approximately 73.9% of patients were treated with breast-conservation surgery (n = 17), requiring axillary lymphadenectomy only in 2 (8.7%). No major complications were reported intraoperatively and postoperatively, and no reintervention was performed due to complications. The registered complications were infectious and resolved outpatient.

None adjuvant radiation therapy was omitted in these patients. Additionally, 69.6% received adjuvant hormonal therapy.

During the follow-up, 6 deaths were identified so far, 3 of theme related to the progression of disease.

Conclusions: Age is no longer a cutoff for surgical managing breast cancer in the elderly. Despite comorbilities, patient's overall health and life expectancy should be considered. Our findings confirm that breast surgery had a low risk of complications and postoperative mortality, even in this group. So clinical decision-making should not be based on age alone.

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Factors associated with adherence to brca1/2 mutation testing after oncogenetic counseling in patients with a previous diagnosis of breast or ovarian cancer

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Introduction: BRCA1/2 mutations account for 5-10% of breast and 15% of ovarian cancers. Criteria for access to BRCA1/2 genetic testing have evolved over the years. Oncogenetic counseling aims to estimate heritable risk and inform patients about the possibility and implications of undergoing predictive testing and risk management.

Methods: We analyzed 50 subjects with a personal history of breast or ovarian cancer who had not been tested for BRCA1/2 mutations at the time of diagnosis but who were eligible according to the most recent guidelines. All patients were offered pre-test oncogenetic counseling and BRCA1/2 genetic testing. We analyzed socio-demographic and psychological parameters associated with the decision to undergo BRCA1/2 testing or the reasons behind the withdrawal.

Results: The mean time from cancer diagnosis to genetic counseling was over 10 years. Thirty-nine patients underwent BRCA1/2 testing, while 11 chose not to pursue the analysis. Patients who accepted genetic testing are younger at the time of cancer diagnosis, more likely to adhere to cancer screening programs (71.8% vs. 45.5%), have more frequently female daughters (63.3% vs. 37.5%), and communicate more easily with family members than those who refuse. Factors associated with test refusal are: having a long-term partner and a negative perception of life. Those who did not undergo genetic testing were asked about the refusal reason with multiple-choice options, 37.5% feared passing the mutation to their children, 62.5% did not undergo testing because of the distance to the hospital, and 50% because of lack of time.

Conclusions: The offer of BRCA testing was well accepted by our study population, despite many years since cancer diagnosis. With the perspective of further broadening access criteria to genetic testing, it is important to understand how to best approach pre-test counseling in patients with previous cancer diagnoses. Considerations for improving adherence to genetic testing may be to involve the family in counseling meetings, given the difficulty in interfamily communication in those who refused the test.

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Obese patient in gynecological surgery

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Obesity is the most frequent challenge in gynecological surgery. Near one third of all women in modern countries are overweighted and obese. The excess weight put the patient at risk of certain side effects and complications. The aim of our study was to compare different methods of hysterectomy in patients with a BMI of 48-60 kg/m.

Hysterectomy in women with high BMI was performed laparoscopically, transvaginally or by laparotomy. Then, the time, difficulty of the operation, the length of hospitalization and complications were assessed.

In our experience, surgery for an obese patient should be planned individually. Minimally invasive surgery, if possible, should be the method of choice. The decision should be made in accordance with the indications for the procedure, the patient's condition and own experience. It may be done by laparoscopy, laparotomy or transvaginally. Panniculectomy often facilitates laparotomy, and subsequent healing.

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Ruptured ectopic pregnancy after use of metotrexate in outpacient clinic. Clinical case

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Introduction: An ectopic pregnancy occurs when a fertilized egg grows outside of the uterus. Metothrexate (MTX) is used for medical therapy. It is a folic acid antagonist that impairs DNA synthesis and cellular replication targeting rapidly proliferating cells. There ar strict criteria of MTX usage (ACOG): hemodynamically stable patient, minimal or no abdominal pain, pretreatment serum hCG concentration levels less than 5000 mIU/mL, gestational sac <4 cm, no fetal cardiac activity, low volume of free intraperitoneal fluid on ultrasonography, absence of medical contraindications, such as clinically important abnormalities in baseline hematologic, renal, or hepatic laboratory values, alcohol use disorder or chronic liver disease. For appropriate patients, intramuscular MTX has success rate comparable to laparoscopic salpingostomy with similar future pregnancy outcomes. Multiple follow-up is required until ectopic pregnancy is resolved.

Clinical case: Young woman, 25 y.o, consulted in Emergency Department, because of severe pain in lower abdomen. Six days before she was consulted in out patient department because of delay of menstruation, ectopic pregnancy in right fallopian tube was diagnosed. bHCG level was 4559 mIU/ml. She received single dose of MTX. No blood test to check renal, hepatic parameters was made. On 4th day after MTX bHCG level was 4885 mIU/ml. Patient didn't have any medical documentation. Patient denays any chronic illness, sensitivities to drugs. Gynecological ultrasound was performed: in right fallopian tube hyperehogenic mass, 3cm in diameter, blood around uterus and right adnexa, in the Douglas patch 3cm. Laparascopy, right salpingectomy was performed. There were blood and blood clots in the small pelvis, in Morrison patch, 1l volume.

Discussion: Before administering MTX, it is necessary to check the patient's blood count, kidney and liver parameters, as well as collect an anamnesis about co-morbidities. Proper observation of the patient and medical documentation's arrangement after MTX therapy is necessary.

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Postnatal bladder care audit

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Introduction: Bladder care is an important aspect of management in the postpartum period. Postpartum voiding dysfunction occurs in a significant number of women, which can potentially cause permanent damage to the detrusor muscle and long-term complications when left undetected or untreated. This will be a Re audit.

Aims of the Study: 1.) Ensure adherence to local & national guidelines 2.) Avoid Urinary retention with bladder over distension particularly in women who have had spinal or dense epidural blocks. 3.) Increase awareness between all staff

Methods: Retrospective, Period April 2022 and December 2022, Random sample of 20 patients

Results:

Demographics:

- Mean age - 28
- Mean BMI - 26
- SVD - 16/20
- Caesareans - 4/20 (3 had spinal and 1 had epidural, all had catheter)
- Instrumentals/repair 3rd or 4th degree tear - none
- Epidurals - 6/20 (1 for CS and 5 in labour)
- Spinals - 3/20 (All for CS)
- GA - None

Compliance 2021 Audit Compliance 2022 Audit

Recording time of first void 87% 65%

Recording volume of first void 69% 55%

Use of catheters Op del - OT 17/18, Non-OT 0/15 (52% overall) All CS had catheters

3rd degree tears - 6/6

Prolonged 2nd stage - 11/20 (55%)

Commencement of the fluid 75% (catheterised) 10%

balance chart 34% (overall)

Discussion: 70% there is clear documentation that the women passed urine 6 hours after delivery or after removal of catheter 6/20 no clear documentation about time of first void (only written in discharge letter or community midwife notes but no timing)

Conclusions: Small size therefore difficult to compare with previous findings

Improve documentation of bladder emptying and timing

Improve on using fluid balance chart within the first 24 hours

Improve awareness of guidelines though staff training and audit.

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Recommendation guidelines for improving the information provided by fertility clinics through websites in eight European countries

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Being better informed about infertility treatment requires that the information provided by clinics is aligned with the concerns and expectations of the public, and also with the legal standards. Few research on medically assisted reproduction (MAR) address the issue of the information that fertility centres provides and disseminates through their webs. During more than two years an international research team has analyzed, from a sociocultural, gender and legal perspective, the information and representations in the field of MAR in 8 European countries (Albania, Belgium, Spain, Italy, Kosovo, Northern Macedonia, Slovenia, Switzerland), by interviewing young adults (18-30 years old) on their knowledge and expectations regarding MAR, and by analyzing the information provided by fertility clinics through their websites. The project team analyzed the websites of 33 medical centres located in the 8 countries of the study (3 to 5 centres per country), using thematic analysis software (NVivo and AtlasTi). The selection of these medical centres was based on an intentional sampling via Google Trends.

In general, the results of the analysis show that citizens needs to be better educated about infertility, including its causes, prevalence, and treatment. In interviews with young persons from participating countries, the sociocultural and gender analysis detected important discrepancies and misalignments. From a legal perspective, all information provided by clinics is regulated by legal standards for truthful advertising and informed consent. We have found in our analysis that information provided by clinics does not always meet these standards.

Our analysis from a gender, sociocultural and legal perspective has allowed us to build national and international guidelines for medical centres and policy makers in order to improve information on infertility and MAR provided by clinics.

The effect of gonadoliberin analogues treatment in precocious puberty on the carbohydrate metabolism in the adulthood.

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TITLE

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Introduction and aim of the study: Precocious puberty is diagnosed when the features of puberty appear before 8 years of age. Gonadotropin analogues (GnRHa) are the gold standard in the treatment of central precocious puberty (CPP), which allows for the achievement of adequate final height. This study aims to evaluate the relationship between CPP treated with GnRHa and the occurrence of carbohydrate metabolism disorders in adulthood.

Methods: Study group of 24 adult women with CPP treated with the GnRHa and a control group of 40 women with thelarche praecox in childhood without GnRHa treatment were compared. Assessment of carbohydrate metabolism in adulthood: concentration of glucose in the blood serum and insulin resistance were performed. The concentration of glucose was determined by the hexokinase method meanwhile insulin resistance was assessed indirectly, based on the results obtained after calculating the index value: HOMA-IR.

Results: In the study group, insulin values were higher than in the control group (12.4 ± 6.9 μIU/ml vs 8.4 ± 4.3 μIU/ml, respectively; $p = 0.031$) and the HOMA-IR ratio was higher in the study group as well (2.5 ± 1.4 vs 1.6 ± 0.9; $p = 0.028$). There were no significant differences in fasting glucose and BMI values between groups. However, we have noticed a tendency into overweight and obesity in the control group (BMI: study group: 23.8 ± 3.1 vs control group: 27.1 ± 6.6; $p = 0.096$).

Conclusions: In women treated in childhood with a GnRHa for central precocious puberty, the prevalence of glucose metabolism disorders and insulin resistance could be higher. In the light of the conducted studies, screening for insulin resistance seems advisable in a group of women treated in childhood with a GnRH analogue.

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vEvaluation of cervical length in twin pregnancies

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Introduction and aim of the study: The clinical management of preterm birth and cervical insufficiency is based on extrapolating normal ranges of cervical length (CxL) for singleton pregnancies. The study aimed to construct CxL charts in twin pregnancies and compare them to singletons

Methods: We performed a retrospective analysis of patients with twin pregnancies who underwent ultrasound examination at St. Sophia Hospital and Out-Patient Clinic in Warsaw from January 2016 to December 2022. We analyzed cervical scans from 20 to 34 gestational age (GA). We calculated 5th, 50th, and 95th centiles of CxL in twin pregnancies and fitted quadratic polynomial regression to these centiles. We compared our results to Silva et al. (2010) referenced normal ranges for singletons.

Results: We qualified 472 twin pregnancies for the study and analyzed 1223 ultrasound examinations. The patients underwent from one to 9 examinations. According to methodology of Silva et al. (2010), we calculated minimum, maximum, mean and standard deviation of CxL in twin pregnancies (table 1). The 5th, 50th, and 95th centiles of CxL in twin pregnancies for each GA and comparison to singleton are shown in table 2. As in singleton pregnancies, the CxL in twins correlated negatively to GA ($r = -0.398$, $p < 0.001$) and decreased by 1.16 mm with every GA, on average ($y = 65.07 - 1.16*GA$, $r^2 = 0.158$). The coefficient for the interpolated 5^{th} centile of CxL in twin pregnancies was $y = 140.279 - 0.852*GA + 0.139*GA^2$, $R^2 = 0.740$; for 50^{th} centile was $y = 54.204 - 0.048*GA - 0.025*GA^2$, $R^2 = 0.911$; for 95^{th} centile was $y = 61.991 - 0.281*GA - 0.006*GA^2$, $R^2 = 0.693$. However, we observed lower values in 5^{th} centile in twin pregnancies than in singletons and higher values in 95^{th} centile (table 2).

Conclusions: There were no similar studies on twin pregnancies before. Twin cervices have wider ranges than singletons. The reference ranges of CxL for twins are needed.

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Pre- and intraoperative administration of Oxytocin during primary and secondary caesarean section – a comparison of different administration protocols – a retrospective analysis

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Introduction: Currently Oxytocin is internationally widely recommended in prevention and therapy of postpartum haemorrhagic bleeding (PHB).

Despite its presence in standard treatment protocols for prevention of PHB, the international administration protocols recommend heterogeneous doses and often do not involve maternal adverse reactions or influence on successful breastfeeding.

Methods: The study includes 37+ WBD primipara patients from 2006 to 2021 (n = 1120) with delivery mode caesarean section at the obstetrics clinic of the University Hospital Frankfurt. Throughout the analyzed years the standard administration protocol at the clinic was changed in multiple steps including, but not limited to 26 IE (n = 120), 13 IE (n = 320), 3 IE (n = 570) and currently none (n = 110).

The data sets obtained are intraoperative blood-loss, antepartum Hb-concentration, alteration of Hb-concentration and doses of administered Oxytocin. Additionally uterine involution and grade of breastfeeding success, based on nursing staff reports and newborn weight gain, will be analyzed.

Results: The so far obtained data from 2021/2020 and 2006/2007 does not identify a raise in maternal morbidity when a significantly lower dose of Oxytocin is administered in a preventive fashion. The blood-losses recorded are not significantly higher when very low dosed (3IE) or no Oxytocin is administered. Neither noted can be an inferior uterine involution.

Conclusion: So far the obtained results show that preventive administration of Oxytocin does not improve maternal outcome after caesarean delivery. Considering the multitude of cardiovascular side effects and the receptor down-regulation Oxytocin should be solely used as a therapeutic remedy during post partum haemorrhage. According to our data a preventive administration, especially of more than 3 IE, does not provide a beneficial effect and should be reconsidered.

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The influence of epidural analgesic techniques on obstetrical outcomes

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Introduction and aim: the field of obstetrics is the one where epidural analgesia (EA) is most utilized. Continuous attempts to improve and perfect the procedure resulted in the development of several EA techniques. The aim of this study is to compare and evaluate the obstetrical differences between three techniques including the programmed intermittent epidural bolus (PIEB), the patient controlled epidural analgesia (PCEA) and the continuous epidural analgesia (CEA).

Methods: this is a retrospective cohort study which investigates the obstetrical outcome of patients who received EA during labour in a tertiary maternal unit over the course of nine years (2011-2018). The only inclusion criterion was the use of epidural analgesia during childbirth and we implemented no exclusion criteria.

Multivariate logistic regression and Kruskal-Wallis-test were utilized to compare the differences between the three EA techniques in terms of Caesarean section rate, the incidence of perineal tears, the need for Oxytocin, the duration of labour and the incidence of paresthesia.

Results: this study included 2240 deliveries with EA; 1084 utilized PIEB, 1086 PCEA, and 70 CEA techniques. The incidence of Caesarean section was the highest in the CEA group (0.457) compared to PIEB (0.248) and PCEA (0.244) $p < 0.001$. A significantly shorter duration of labour (vaginal delivery) was observed in the PCEA group (n:821, 336.74 minutes) compared to the PIEB group (n:814, 368.89 minutes) $p < 0.001$. There were no statistically significant differences in the incidence of perineal tears, the need of uterotonics and the incidence of paresthesia.

Conclusion: the results of this study indicate that the PIEB and PCEA techniques are superior to the CEA technique when it comes to analgesia during childbirth. In this study the PCEA technique seems to be the best suited technique for childbirth since it had a significantly shorter duration of labour than the PIEB technique.

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Lactobacillus spp in vaginal and cervical smears in patients with endometrial cancer

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Introduction and aims of the study: Lower female genital tract is colonized by a diverse community of various commensal, symbiotic and pathogenic microorganisms, which include bacteria, archaea, protozoa, fungi, and viruses. All these microorganisms form specific microbiome and play an essential role in maintaining women's health and homeostasis. In majority of healthy women the microbiome of the lower part of female genital tract tends to be dominated by different Lactobacillus species. The aim of this study was to characterize the cervicovaginal microbiota of women undergoing hysterectomy for benign disease, endometrial atypical hyperplasia, or endometrial cancer.

Methods: All vaginal and cervical swabs were collected by the surgeon in sterile surgery room before hysterectomy. Real-Time PCR Assays were performed using the 16S rRNA gene as the target. Each Microbial DNA qPCR Array plate analyzed one sample for 19 different bacterial species.

Results: In 96 patients included in the study, endometrial cancer (48 patients), atypical hyperplasia (21 patients), and benign condition (27 patients) was diagnosed. The demographic and clinical characteristics for all participants were obtained. 557 species/genes of 19 various microbial species were identified in the study group: 322 from vaginal and 235 from cervical samples. The most frequent bacterial species in all groups were *G. vaginalis*, *F. nucleatum, and M. curtisi*. The incidence of *F. nucleatum* and *M. curtisii* in vaginal samples was significantly higher in comparison to cervical samples (38.5% vs. 24.0%, $p = 0.043$ and 35.5% vs. 17.7%, $p = 0.009$, respectively). *L. iners* was significantly more

frequent in patients with benign conditions whereas *M. curtisii* was more frequent in cancer patients. In general, *Lactobacillus* species and *G. vaginalis* were detected significantly less frequently in cancer group of patients. Changes in microbiota composition may play an important role in endometrial cancer disease development.

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Clitoral epidermal inclusion cyst in adult population: a case report and literature review

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Introduction and aims of the study: Clitoral cysts are rare conditions that usually arise in pediatric population. They can be both benign or malign, congenital or acquired, and the most common forms are epidermal inclusion cysts. These cysts are most frequently subsequent to trauma, in particular female genital mutilation, and present an unclear etiology, with possible hormonal abnormalities involved.

The purpose of this study is to present an unusual form of clitoral cyst, occurring in an adult, post-menopausal woman, without any evident risk factor.

Methods: A 56-year-old patient, in physiologic menopause and without history of genital trauma, referred to our clinic with a 4 cm spontaneous swelling in the clitoral area. The patient reported a progressive growth over the previous 2 years, and lamented discomfort and dispareunia.

After undergoing clinical and radiological examination, an unilocular, hypoechoic, non-vascularized cystic structure was described at US evaluation. The cyst was surgically removed, caring to avoid neurovascular bundle areas of the clitoris, and was confirmed as epidermal inclusion cyst at the histopathological examination.

Results and/or discussion: A review of literature was performed, highlighting 22 cases of spontaneous clitoral epidermal inclusion cyst: only 5 cases were described in adult population, one of which during pregnancy and one in the postpartum period. This highlights how these forms are extremely rare causes of clitoral swelling, typical in pediatric population, with hormonal abnormalities described as possible etiological factors.

Conclusions: Epidermal inclusion clitoral cysts are rare benign cysts that may cause huge discomfort to the patients, both physical and psychological, which can lead to sexual dysfunction if left untreated. Therefore, it is important for clinicians to recognize them, bearing in mind the possible development also in post-menopausal age, and to counsel and correctly manage these patients in order to guarantee a satisfying, sexual and non, quality of life.

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External Cephalic Version at outpatient clinic

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Backgrounds: External cephalic version (ECV) is safe and effective way to reduce Cesarean section (CS) by approximately two-thirds in term breech pregnancies. Recent Cochrane review recommends ECV for all term breech presentation if no contraindications of vaginal birth. RCOG guidelines also state that starvation, anesthetic premedication and intravenous access are unnecessary because of very low complication rate related with ECV. We have run the largest outpatient ECV clinic in Korea since 2015. We want to share our experiences of ECV trials.

Methods: 1,809 pregnant women visited for ECV from March 2015 to December 2022. Before ECV procedure, we routinely take medical history and vital sign check-up, ultrasonography and cardiotocography (CTG). After trial, fetal well-being was evaluated by post-trial CTG at least 30 minutes. From medical history taking, 22 pregnant women were excluded (twin pregnancy, ≥2 previous CS, less than 36 weeks of gestation, etc). On pre-trial ultrasonography 206 pregnant women were excluded (cephalic presentation, macrosomia, fetal growth restriction, oligohydroamnios, etc).

On pre-trial CTG, 11 women with non-reassuring CTGs were excluded. Just before ECV trial, we evaluate the tightness of buttocks stuck in maternal pelvis by manual palpation and another 480 pregnancies were excluded. Finally, 1,092 term breech pregnancies remained for ECV trial at out-patient clinic. Without pre-medications, intravenous access, ECVs were done by three obstetric specialists (one highly experienced, two beginners). We evaluated success rate and complications as well.

Results: 501 cases (45.8%) out of 1,092 term breech pregnancies were successful. In success group, mean time consumed for ECV trial was 39.6 seconds (83% were successful within 30 seconds). Transient bradycardia was developed in 66 cases (13.2 %). Significant bradycardia (less than 90 beats per min, longer than 2 min) was developed in 16 cases (3.2%) and all but one (emergent CS was done) were completely recovered. Fourteen case of vaginal bleeding (2.8%) were found and one case with heavy bleeding was arranged for emergent CS.

In failure group, transient bradycardia was detected in 29 cases (4.9%) and no significant bradycardia developed. Vaginal bleeding was found in 6 cases (1.0 %) and two emergent Cesarean sections were done due to persistent vaginal bleeding. In all cases showed complications including CS, final maternal and neonatal conditions were excellent without any long-term sequelae.

Conclusion: Outpatient ECV, which has a considerable success rate (45.8 %) with relatively low complication rates (0.36 % of emergent CS rate), should be encouraged where emergency cesarean section can be performed.

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Effects of the pregnancy planning education on fertility knowledge and family planning for unmarried university students

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***Introduction and aims of study*:** To develop a planned pregnancy education program for unmarried university students and apply it to evaluate its effectiveness. An educational program on awareness of pregnancy planning is provided for unmarried university students to verify changes in family planning and fertility knowledge.

Methods: A randomized control trial design using pre-test and post-test. Reproductive life plan was assessed: 'Do you plan to marry in your life?' (yes/no/don't know), 'do you want children/more children?' (yes/no/don't know) and affirmative responses were followed by three questions about how many children and the desired age for having the first and last child. Fertility knowledge was assessed using the 13-items. The study participants were university students in Korea. Educational program on awareness of pregnancy planning was a 2-week course for university students. This course was provided through ZOOM. Education was provided on what pregnancy planning is and its importance. And the importance of Reproductive life plan (RLP) was emphasized.

main outcomes

Results: Experimental group (n = 29), control group (n = 31). mean age were 22.0(SD 2.8), 22.5(SD 2.1) respectively. Fertility knowledge score was significantly increased in the experimental group (t = -4.00, p < 0.001), RLP was not shown the significant change.

Conclusions: Education was found to be effective to enhance the knowledge related fertility. it would be limitation of this study regarding education type (non-face to face) in the COVID-19. Despite of RLP was not changed significantly in this study, follow up education and assessment would be necessary.

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The conservative treatment of [LDQUO] early stage [RDQUO] cervical cancer: the role of histological tumor grown pattern

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Introduction: Radical Hysterectomy represents the standard surgical care for patients affected by "early stage" cervical cancer.

Several studies have shown that parametrial involvement when tumor is < 20 mm with stromal invasion < 10 mm is almost negligible. On that basis, the "SHAPE" trial is assessing if reducing the surgical radicality in this type of cervical cancer is possible.

Objects: The primary aim of our study was to evaluate if also for tumor up to 3 cm, parametrial involvement is negligible.

Subsequently, we investigated new potential predictive factors of parametrial involvement: cervix free margins, tumor up to the cervical wall, exophytic vs endophytic, mitosis, expansive, comedonic and infiltrating tumor growth-pattern.

The expected outcome could guide the clinical decision avoiding under or overtreatment.

Methods: Eightyseven anatomopathological specimen of patients underwent radical hysterectomy from 2009 to 2020 at Sant'Anna Hospital in Turin were reviewed by two pathologists according to known and assumed parametrial invasion predictive factors.

Study popolation was stratified into three groups:

- group A with SHAPE trial inclusion criteria (tumor size(T) < 20 mm and depht of stromal invasion(p) < 10mm);
- group B (T 21-30 mm and p > 10 mm);
- group C (T > 30 mm).

A univariate binary logistic analysis was conducted selecting parametrial-positivity as the dependent variable.

Results and conclusions: Group B was comparable to group A except for the LVSI and exophytic variable. On the contrary, Group C has showed different characteristics and age range from the other two.

Parametrial infiltration was confirmed significantly associated with the patient age, the lymph node involvement and LVSI.

Additionally, the comedo-like grown pattern and the tumor "up to the cervical wall" were predictive factors of parametrial involvement.

In conclusion, radical hysterectomy could be an overtreatment also in cervical cancer < 3 cm except for comedo-like ones, for which radical surgery should be preferred.

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Effectiveness and safety of transvaginal mesh ingynious posterior (a.m.i.) in enetrocoele surgery

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Introduction, aims of the study: Treatment of pelvic organ prolapse with transvaginal mesh remains controversial due to risk of complications especially in posterior compartment. On the other hand, treatment of high and wide enterocoele is the most difficult defect to treat and it seems that novel single incision TVM might be taken into consideration in surgery portfolio. The aim of the study was to evaluate anatomical results and safety of surgical treatment of Ingynious posterior (A.M.I) single incision 6-point fixation vaginal mesh in enterocoele confirmed in US examination.

Methods: 23 women were included to a prospective study (2019-2022). Inclusion criteria were POPQ≥stage III in apical and/or posterior compartment with enterocoele confirmed in US examination and high risk of laparoscopic procedures. Each patient completed a urogynecological examination according to the IUGA-ICS POP-Q staging system and the validated P-QoL questionnaire before the operation and 4-12 postoperatively.

Results: Mean Ap was 2,12 ± 1,68cm, before surgery vs -1,95 ± 1,20cm postoperatively while Bp 5,08 ± 2,10 vs -1,97 ± 1,22 respectively (p < 0,001). Mean C point position was 2,60 ± 2,96cm before vs -4,53 ± 2,20 post-surgery (p < 0,001). TVL remained unchanged after surgery. We observed changes in Aa point position (Aa -0.73 ± 2,05cm vs -1,58 ± 1,43cm, ns) after the surgery and statistically significant improvement in Ba point position (Ba 0,58 ± 3,13 vs -1,63 ± 1,43cm, p < 0,001). As far as POPDI is concerned we showed significant improvement in examined fields (p < 0,001), except the necessity of manual maneuvers during bladder emptying. In 1 case we observed mesh exposition. In 4 cases relapse of POP in apical compartment was observed that required reoperation and kolposacropexy was performed. In 1 case

the mesh was removed due to inability to empty the bladder in patient who underwent Burch surgery few years before.

Conclusions: Ingynious posterior is effective system as far as objective and subjective results in enterocoele surgery is concerned. No dyspareunia de novo was observed.

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Intrapartum ultrasound to assess labor progress. A pilot study in Greece

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Introduction: The progress of labor is traditionally based on clinical examination. The labor curves have been reevaluated due to changes in both population characteristics and obstetric practice. Intrapartum ultrasound has emerged as an objective method for the assessment of fetal head station.

Aim of study: This study aimed to describe the labor curves in a Greek population using intrapartum ultrasound.

Methods: This was a prospective cohort study of consecutive laboring women in a university obstetric department in Thessaloniki, Greece. Cervical dilatation was examined digitally and the fetal head descent was examined transperineally with the measurements of the angle of progression (AoP) and head-perineum distance (HPD).

Results: Our preliminary data included 50 women. The mean maternal age was 28, the median gestational age was 39 weeks, the median BMI was 29 kg/cm^2 and the median of the parity was 1. Twenty-one (42%) had a spontaneous onset of labor, 29 (58%) had an induction of labor, 24 (48%) had epidural analgesia, 32 (64%) received oxytocin, 15 (30%) delivered with a cesarean section and 35 (70%) vaginally. The median duration of labor was 9 hours (IQR: 8, 95% CI: 8.27-11.70). An acceleration phase of maximum mitigation of the angle was noticed, 8.5 hours before birth, cervical dilatation progressed from 4cm to 10cm in 7 hours and the AoP was >100°, at 4.5 hours before birth in the whole study population. In spontaneous deliveries, rapid descent started 3 hours before birth, whereas in induction of labor 8 hours before birth. A slower descent was noticed in women who received epidural analgesia and oxytocin. The fetal head was engaged earlier in nulliparous.

Conclusions: Intrapartum ultrasound allows the objective measurement of fetal head descent. Parity, spontaneous onset, epidural and oxytocin affect the labor curve.

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A retrospective study on recurrent high-grade cervical intraepithelial lesions after surgical treatment

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Introduction and aims of the study: The aim of this study was the identification of the risk factors of cervical pathology recurrence after surgical treatment of high-grade intraepithelial lesions.

Methods: This was a retrospective study of patients with cervical pathology (+CIN 2) during the period 2014-2020. The Chi-square test was used to identify the risk factors of recurrence and the Kaplan-Meier survival analysis for the study of the recurrence of the lesions.

Results: Eighty-three patients with high-grade intraepithelial lesions were reported. The median age was 37 (IQR: 13, 95% CI: 13.95-40.4018), whereas the median number of partners was 5 (IQR: 7.95% CI: 5.5299-8.6147). Eighty-one (97.6%) patients were treated with Loop Electrosurgical Excision (LEEP) and 2 (2.4%) with cold knife conization. The histopathological results showed 1 case of CIN 1 (1.2%), 3 CIN 1-2 (3.6%), 20 CIN 2 (24.1%), 6 CIN 2-3 (7.2%), 41 CIN 3 (49.4%), 5 IA1 (6%), 2 IA2 (2.4%) and in 5 patients (6%), the results were negative for cervical lesions. The surgical margins were positive in 23 cases (27.7%), the excision of the cone was completed in more than one piece in 27 cases (32.5%), and its depth was up to 1 cm in 18 cases (21.7%). Recurrence was noticed in 25 cases (30.1%). The mean time of recurrence was 12 months (IQR: 3, 95% CI: 10.45-12.75). Positive surgical margins (p-value<0.001, ORs: 12.952, 95% CI: 4.158-40.347) and excision of the cone in more than one piece (p-value=0.003, ORs: 4.406, 95% CI: 1.617-12.002) were related to increased risk of recurrence.

Conclusions: The recurrence rate of high-grade intraepithelial lesions after surgical treatment was high. The positive surgical margins and the excision of the cone in multiple pieces during treatment were the most significant factors of recurrence.

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Objective and subjective results of native tissue repair (plication of pubo-cervical facia) in isolated anterior compartment defects

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Introduction: Renaissance of native tissue repair is being observed since transvaginal mesh have been criticized because of complications. Pubo-cervical plication Is one of native tissue repair variation in anterior compartment.

Aim of the study: The aim of the study was to evaluate quality of life and anatomical results of pubo-cervical fascia plication in isolated anterior defect.

Methods: 125 women were included to a prospective study (2020-2022). Inclusion criteria were POPQ≥ stage II in anterior compartment. Patients with apical defect >POPQ I, were excluded. Each patient completed an urogynecological examination (POP-Q staging and the validated POPDI, IIQ7, CRADI-8, UDI-6 questionnaires) prior and 4-12 months after the operation.

Results: Mean Aa point was before 1,37±1,01cm vs -1,09±1,26cm after the surgery (p<0,001), while Ba 1,77±1,26cm before vs -1,02 ±1,43cm after (p<0,001).

Mean Ap was -1,95±0,87cm before vs -2,14±0,64cm postoperatively (p=0,02), while Bp point remained unaffected.

Mean C point position was -3,11 ± 2,50cm before vs -4,40 ± 2,52cm post-surgery (p < 0,001),

As far as POPDI is concerned we showed significant improvement in all examined fields (p < 0,001), except the tension in the lower abdomen and necessity of manual maneuver during rectum emptying. We did not observed improvement in CRADI-8 while significant changes were noted in UDI-6(pollakisuria and difficulties in bladder emptying) (p < 0,001). In IIQ7 improvement in sport activity, travelling, social life and frustration level was detected.

In 8 (6,4%) cases we observed recurrence in anterior compartment. In 2 (1,6%) cases relapse in anterior and apical compartment was diagnosed. In 2 patients wound dehiscence occurred. 2 patients developed a hematoma.

Conclusions: Native tissue repair is an effective technique in isolated anterior defect. We did not observe serious complication. Higher relapse percentage described in literature is probable connected with less strict qualification to native tissue repair patients with concomitant apical defect.

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The prognostic significance of heart rate variability in pregnant patients and newborns

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Heart rate variability illustrates autonomic modulation of the cardiovascular system. A high variability of HRV is interpreted as normal, while a reduced HRV indicates ANS imbalances and bad prognosis of patients. HRV is a prognostic factor in selected clinical conditions, and changes in its components precede clinical symptoms. The aim of the study is to assess changes in the value of HRV parameters in pregnant patients in the 1st, 2nd and 3rd trimesters, after childbirth and in newborns after childbirth. Patients with signs of infection, diagnosed with additional disorders affecting the function of the ANS, patients who did not comply with the recommendations of the preparation for the study zwere excluded from the study. The assumed research group is to consist of about 100 patients, and the control group consists of non-pregnant patients. The HRV analysis was based on a 5-minute measurement with the Polar h9 M-XXL heart rate monitor, the results recorded and analyzed on the Elite HRV app. Selected parameters from the time domain (mRR, SDNN, RMSSD, pNN50), frequency (LF, HF, LF/HF) and non-linear methods (SD1, SD2) were included in the analysis. HRV parameters decreased as pregnancy proceeded. Pregnant women with gestational hypertension have higher LF to HF ratio (LF/HF) in early pregnancy than those with normal pregnancies. HRV analysis makes it possible to assess the risk of cardiac events and forecast the progression of the patient's condition. HRV monitoring during pregnancy could be used for the early detection of complications, such as gestational hypertension and pre-eclampsia. This may provide early warning for mothers in a noninvasive and cost-efficient manne. Furthermore, HRV may reflect the state of mental health in pregnant women. Detailed results of the study remain in development.

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Gynaecological endoscopic surgery in elderly women: which outcomes?

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Introduction and aims of the study: Endoscopic gynaecological surgery is a standard approach to treat many benign and malignant gynaecologic conditions. Compared to conventional laparotomy, endoscopic surgery has better perioperative outcomes, including decreased blood loss, pain, shorter hospital stay and faster overall recovery. The main goal of this study is to assess the safety and feasibility of endoscopic surgery performed in an experienced Department over a 3-year period in women over 65 years old with a variety of gynecological conditions.

Methods: Retrospective descriptive study of endoscopic surgeries performed in women aged 65 or older with benign or malignant gynecological disease in a single Department, between January 2020 and December 2022, which include the pandemic period.

Results and Discussion: A total of 378 endoscopic surgeries were performed: 296 ressetoscopies and 82 laparoscopic surgeries. More than half of patients had a significant preoperative risk due to medical disease: 196 women were classified as ASA III or IV. Concerning surgical hysteroscopies, no significant blood loss intraoperatively or prolonged hospital stay was registered. The most common complication was inability to access the endometrial cavity, mostly due to severe cervical stenosis. Of all laparoscopic surgeries, 55 were related to malignant conditions. In this subgroup, there was only one conversion to laparotomy due to a vascular complication. There were 2 readmissions to the hospital due to pelvic abscess, without the need for invasive procedures or surgery. The other complications registered were 2 cases of small bowel injuries (diagnosed and treated intraoperatively), a pelvic infection treated with ambulatory oral antibiotics, lower urinary tract infections, a functional ileus and an infection of laparoscopic port.

Conclusions: This study highlights the safety and effectiveness of gynaecological endoscopic surgery in women aged 65 or more, with either benign or malignant diseases.

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Grading of endometrial cancer ^{1}h hr-mas nmr-based metabolomics

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Introduction and aims: The metabolic profiles were obtained from 64 patients (14 with grade 1 (G1), 33 with grade 2 (G2) and 17 with grade 3 (G3) tumors) and compared with the profile acquired from 10 patients with the benign disorders.

Methods: The tissue metabolomic characteristics associated with endometrial cancer (EC) at different grades were studied using high resolution (400 MHz) magic angle spinning (HR-MAS) proton spectroscopy.

Results: OPLS-DA revealed increased valine, isoleucine, leucine, hypotaurine, serine, lysine, ethanolamine, choline and decreased creatine, creatinine, glutathione, ascorbate, glutamate, phosphoethanolamine and scyllo-inositol in all EC grades in reference to the non-transformed tissue. The increased levels of taurine was additionally detected in the G1 and G2 tumors in comparison to the control tissue, while the elevated glycine, N-acetyl compound and lactate-in the G1 and G3 tumors. The metabolic features typical for the G1 tumors are the increased dimethyl sulfone, phosphocholine, and decreased glycerophosphocholine and glutamine levels, while the decreased myo-inositol level is characteristic for the G2 and G3 tumors. The elevated 3-hydroxybutyrate, alanine and betaine levels were observed in the G3 tumors. The differences between the grade G1 and G3 malignances were mainly related to the perturbations of phosphoethanolamine and phosphocholine biosynthesis, inositol, betaine, serine and glycine metabolism. The statistical significance of the OPLS-DA modeling was also verified by an univariate analysis.

Discussion: HR-MAS NMR based metabolomics provides an useful insight into the metabolic reprogramming in endometrial cancer.

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Metabolic characterization of ovarian cancer using j-resolved 1h hr mas NMR spectroscopy

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Introduction: Epithelial ovarian cancer is the deadliest gynecologic cancer, due in large part to recurrent tumors. Most patients are diagnosed in stage III or IV disease and have a dismal 25% 5-year survival rate. The heterogeneity and molecular basis of this disease remain incompletely understood.A better understanding of the biology of cancer will provide more effective, personalized therapy to patients.

Methods: The studied group consisted of 23 patients diagnosed with ovarian cancer and 14 control patients hospitalized at the Department and Clinic of Gynecology and Obstetrics of the Medical University of Silesia in Katowice. The tissue samples from tumors and normal ovaries were harvested during surgery and frozen (-80˚C) until NMR analysis. The two dimensional 1H J-resolved spectra were acquired on Bruker Avance III 400 MHz NMR spectrometer equipped with 1H/13C optimized HR MAS probe. After the measurements the samples were frozen for histopathological evaluation. The one dimensional projections of the spectra onto the chemical shift axis were normalized to the sample weight and the spectral regions corresponding to specific metabolites were manually integrated. Orthogonal Partial Least Squares – Discriminant Analysis (OPLS-DA) was exploited for differentiation of the cancerous from normal samples.

Results and discussion: The histopathological analysis of the post-HR MAS NMR samples confirmed a cancer cells percentage above 20% in the specimens excised from the tumors. The OPLS-DA analysis resulted in the 2-component model (1 predictive + 1 orthogonal, R2X = 44.7% , R2Y = 76.1%, Q2 = 60.4%, p CV-ANOVA < 0.00001) and revealed the increased levels of the branched-chain amino acids, lactate, alanine, N-acetyl group containing compound, UDP sugars, methionine/glutamate, glutamate, glutamine, creatine, glycine, threonine, fumarate and the decreased taurine level in ovarian cancer in comparison to the normal ovary.

Conclusion: J-resolved 1H HR MAS NMR spectroscopy permits differentiation of ovarian cancer from normal ovary tissue and provides a valuable insight into the metabolic processes underlying the disease.

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Gestational trophoblastic neoplasia therapy in Slovak republic - 30 years results

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Introduction and aims of the study: The Centre for Gestational Trophoblastic Disease was created in the Slovak Republic (SR) in Bratislava in the year 1993, after the split of former Czechoslovakia.

Methods: Retrospective analysis results of gestational trophoblastic neoplasia (GTN) treatment in the Centre for gestational trophoblastic disease in the SR in the years 1993-2022 according to prognostic scoring and staging system FIGO/WHO (International Federation of Gynecology and Obstetrics/World Health Organization).

Results: A total of 122 cases of GTN were treated, out of them 56 was persistent gestational trophoblastic neoplasia, and histologically confirm was 39 choriocarcinomas, 19 invasive and metastatic hydatidiform moles (I&MHM), 5 placental site trophoblastic tumour (PSTT), 2 epithelioid trophoblastic tumours (ETT), 1 mixed trophoblastic tumour. According to prognostic scoring/staging system FIGO/ WHO, 75% patients were at a low risk and 25% of patients were at a high-risk of GTN. There were 53, 4, 34 and 9% patients in FIGO stages I, II, III, and IV, respectively. Total curability rate of GTN was 97%, in stages I–III was achieved 100%, but in stage IV only 64 %. Curability rate 100% was achieved in all I&MHM, PSTT, ETT, mixed trophoblastic tumours and persistent gestational trophoblastic neoplasia, but in choriocarcinoma it was 90%. Relapse of the disease was in 4 cases. Mortality rate was 3%, but in last 14 years no patients died on GTN.

Discussion: Early detection and centralisation of the treatment are crucial points for successful treatment, as the high curability rate of GTN is achieved by effective therapy. Centralisation of GTN in SR is excellent, but in early detection there are still reserves.

Conclusions: The results of the treatment of GTN in the SR are comparable with those achieved by other specialized centres for the treatment of GTN in Europe and in the world.

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Remission of lesions in the oral cavity after vaccination against human papillomavirus

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The human papillomavirus (HPV) is transmitted through direct contact with infected people. It can be transmitted through touch, kissing and sexual intercourse HPV can also be transmitted by people who do not have symptoms, because the virus can stay in the body for many years without causing any symptoms.

Oral HPV may be asymptomatic or cause symptoms that include redness or discoloration of the skin, pain, itching, and swelling. In extreme cases, it can lead to the formation of cancer.

Our patient's laryngological examination revealed nodular lesions of unknown origin, causing significant discomfort during speech.

Methods: Histopathological examination of the lesions removed from the oral cavity was performed. The patient went to a gynecology clinic, where a cytological examination was performed, followed by colposcopy and HPV DNA testing from vaginal and oral secretions.

Results: HPV genetic material was detected in the patient's lesions excised from the oral cavity. No p16 protein was found in the examined material, the proliferative index K67 was elevated.

In the HPV DNA test, the same type of virus as found in the oral cavity was obtained from vaginal secretions.

The patient was offered three HPV vaccinations. Half a year after the last vaccination, a full laryngological and gynecological examination was carried out - including colposcopy and HPV DNA testing in oral and vaginal secretions, with normal results, no genetic material of the virus was obtained.

Conclusions: It is necessary to disseminate knowledge about HPV vaccinations to prevent the dangerous consequences of virus infection among patients and doctors who are not gynecologists.

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Is exposure to persistent organic pollutants linked to pelvic endometriosis?

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Introduction and objectives: The health toxicity of polycyclic aromatic hydrocarbons (PAHs), present in air and food, generated during energy production and waste incineration, is well known. PAHs can activate the aryl hydrocarbon receptor, which may interact with classic estrogen receptors and modify estrogen-dependent inflammation in endometriosis. There is no data on the hypothetical role of PAHs in the etiopathogenesis of endometriosis. The aim was to compare PAHs concentrations in visceral fat in women with endometriosis and idiopathic infertility.

Methods: A prospective cohort tertiary-center study (consent no. 1072.6120.333.2021), from July to December 2022, included women aged 18-45, undergoing laparoscopy due to pelvic endometriosis or/and idiopathic infertility. Written informed consent was obtained for participation in the research. A sample of the greater omentum was collected intraoperatively for detection of 16 PAHs, i.e. acenaphthene, acenaphthylene, anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene, benz[a]anthracene, benzo[b]fluoranthene, benzo[k]fluoranthene, benzo[ghi]perylene, benzo[a]pyrene, chrysene, dibenz[a,h]anthracene, and indeno[1,2,3-cd]pyrene, by gas chromatography-isotope dilution mass spectrometry method. PAHs concentrations were compared in both populations using the Chi-square test and the Mann-Whitney U test.

Results: 20 women aged 24-42 were enrolled. Endometriosis was confirmed in 14, idiopathic infertility in 6 women. There were no significant differences in PAHs concentrations between the two populations and between different stages of endometriosis. Significantly lower levels of acenaphthene ($p = 0.09$), acenaphthylene ($p = 0.006$), anthracene ($p = 0.03$), fluoranthene ($p = 0.045$), fluorene ($p = 0.02$), phenanthrene ($p = 0.03$), pyrene ($p = 0.04$) were found in women with peritoneal adhesions than in women without adhesions, regardless of the diagnosis.

Conclusions: The results showed no difference in PAHs concentrations in the studied populations. Determining the toxicity of PAHs in endometriosis requires further studies in a larger population.

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Caesarean section by maternal request in lithuania. what do obstetricians/gynaecologists and midwives think?

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Introduction: Cesarean section (CS) by maternal request is becoming more popular in the vast majority of Europe. Discussions about legalization of CS on demand have been going on in Lithuania for a while.

Aims of the study: To evaluate Lithuanian OB/GYN and midwives' views on CS by maternal request, and opinion about factors that lead women to choosing CS.

Methods: Online anonymous questionnaire was shared with OB/GYN and midwives through Lithuanian Society of Obtetricians and Gynecologists and Lithuanian Midwives Association home pages. Survey took place between 01.12.2021 and 01.02.2022.

Results: The survey was filled out by 191 respondents (131 OB/GYN and 60 midwives). Mean age of respondents was 46.9 ± 14.3 years. Average working experience was 21.7 ± 14.6 years. Main CS advantages: avoidance of birth pain (43.5%), prevention of future organ prolapse (41.9%) and incontinence (38.2%). Respondents indicate that main factors leading women to choosing CS are: chance to avoid birth pain (71.7%), previous traumatic birth experience (61.8%), protection of newborns from natural birth related complications (40.3%).

Only 26.2% of respondents agree that CS on maternal request should be legalized. Moreover, only 40 out of 131 OB/GYN (30.5%) would agree to perform CS on demand. There was significant association between opinion that maternal request as an indication for CS should be legalized and both: agreement to perform CS on demand ($p < 0.05$) and declaring that state should cover the cost of the surgery ($p < 0.05$). There was no significant difference between respondents'

years of experience and being for or against CS on demand, respectively 23.71 ± 14.45 vs 21.01 ± 14.6 (p = 0.518).

Conclusions: Only less than one third of respondents, who are responsible for perinatal health, agree that CS on maternal request should be legalized. To perform CS on demand would agree only 30.5% of OB/GYN.

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Trainee selection; moving to evidence-based processes

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Throughout the world, on a monthly basis young promising doctors lay their fate in the hands of senior medical specialists to determine whether they are worthy of being accepted as a trainee in the postgraduate training programs of their desire. Unfortunately, the decisions made in trainee selection are often based on subjective observations and random information. In the Netherlands, trainee selection in postgraduate training (PGT) is determined and carried out on a local level in all seven university hospitals differently for all medical specialties.

In general, the purpose of selection is usually described in terms such as selecting 'the best' candidates, without further specification. However, societal changes call for more well-considered and evidence-based procedures that consider moral values such as equity, fairness, social accountability, and transparency of selection procedures to create a workforce that better answers to the needs of society.

Therefore, at the department of Obstetrics and Gynaecology of the Amsterdam University Medical Center (AUMC), a trainee selection process was developed that is evidence-based and specialty-specific. The procedure is transparent for all potential participants and entails anonymous evaluation of work- and learning experiences and efforts in a variety of fields (e.g. clinical excellence, scientific research, medical education, business and management). Following, a selection of participants is invited for a semi-structured interview in which those competencies that are considered most important for a gynaecologist are evaluated through the STARR (Situation-Task-Action-Result-Reflection) method, by a committee consisting of academic as well as non-academic gynaecologists and trainees. Those performing best in the interview are selected to start training.

We believe that our findings may be of value for different European countries, to improve trainee selection throughout the whole of Europe. Therefore we aim to share our experiences and our challenges and offer some practical knowledge and recommendations on how to achieve evidence-based selection of trainees.

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Sepsis of unknown origin in pregnancy – mind the oral health care: Case report

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Background and objectives: Fever of unknown origin in pregnancy requires excessive diagnostics and causal treatment because it could be a sign of developing sepsis. It is a life threatening condition that spreads rapidly especially in pregnant women. The aim of this case study is to highlight the importance of dental care during pregnancy.

Methods: This case report was prepared on the basis of a literature review in Pubmed and UpToDate databases and medical records of patient treated in The Department of Obstetrics and Pathology of Pregnancy of Independent Public Teaching Hospital No 1 in Lublin.

Case report: A 27 year old patient in her 27 week of pregnancy was being diagnosed with a fever of unknown origin. The patient in a good condition was reassigned after 24 hours from The Infectious Disease Ward to The Department of Obstetrics and Pathology of Pregnancy for observation. Few hours later she initiated presenting oliguria, unresponsive hypoxemia and persistent hypotension which resulted in necessity of intubation and vasopressors administration. In microbiological testing each culture was sterile, no relevant antiviral nor antibacterial antibodies were found. Despite receiving intensive care support and broad spectrum antibiotics, she was in critical condition. The patient was consulted with maxillofacial surgeons. They stated poor hygiene of oral cavity. Four teeth with caries were extracted. Afterwards, inflammatory markers began to decrease and the patient condition improved. She was extubated and after completing treatment, she was discharged and delivered an infant in a good condition at 41 weeks pregnant.

Conclusions: The course of sepsis in pregnancy could be fulminant and fatal if not detected early. This is why a holistic approach was crucial. The patient had an outstanding improvement after extractions and overcame her condition after intensive care support.

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Protocol of Breast Cancer Prevention Model with Addition of Breast Ultrasound to Routine Gynecological Visits as a Chance for an Early Diagnosis and Treatment in 25 to 49-year-old Polish Females

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Background: The low attendance rate for cancer screening tests in Poland is a major healthcare concern that requires specific analysis and the development of implementation recommendations for prevention, and both actions are likely to benefit culturally similar countries. Four female cancers account for approximately 20% of all cancer cases —breast cancer, cervical cancer, endometrial cancer, and ovarian cancer—suggesting that gynecologists have a significant preventative role. Of the four, breast cancer and cervical cancer are among the 10 most common malignant neoplasms globally, regardless of gender, occur only in women and are known to have effective screening measures. Our research aims to create a screening model that combines cervical cancer and breast cancer to maximize health outcomes for women at risk of both cancers.

Methods: In the study protocol, we have created a model that maximizes benefits for patients with minimal additional costs to the health care system. To achieve the set goal, instead of regular clinical breast exams as recommended by the gynecological societies, we proposed an ultrasound examination, during which palpation may also be performed (in the absence of elastography). We present a scheme for such a protocol that takes into consideration all types of prevention in both cancers, and that emphasizes breast ultrasound as the most frequently missing element.

Discussion: Our study includes a discussion of the strengths and weaknesses of our strategy, and the crucial need for infrastructure and education for the successful implementation of the program. We conclude that our model merits consideration and discussion among health-care decision makers, as the screening changes we propose have significant potential benefits for the female population.

Keywords: screening; cervical cancer; breast cancer; ultrasonography; mammography; value-based healthcare; health policy; senology.

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A retrospective multicentre review on laparoscopic niche repair

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Introduction and aim of the study: The aim of this study was to evaluate laparoscopic niche repair as a safe and therapeutical option for patients with a residual myometrial thickness (RMT) ≤ 3 mm.

Methods: This was a retrospective multicentre study of all patients undergoing a laparoscopic niche repair from January 1, 2016 through March 1, 2021. Patient data were obtained from the electronic medical record or provided by the performing surgeon.

Results: A total of 13 patients were included in this study. Median follow-up was 5 months. 1 per-operative complication, and no post-operative complications or long-term morbidity were withheld. Median RMT increased from 1.5 ± 1 mm to 5.2 ± 1.7 mm (mean ± SD). 69.2% of the patients experienced symptom resolvement. 9 patients had a subsequent successful pregnancy.

Conclusion: The laparoscopic niche repair is a safe minimal invasive option for symptomatic patients, able to offer symptom relief. The role for repair in asymptomatic subfertility remains up for debate.

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Successful management of an unstable Jefferson fracture in pregnancy

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Introduction and aims of the study: Atlas fractures are triggered by axial force on the stretched neck, which can lead to bursting of the atlas arch. In unstable fractures, compression of the spinal cord might lead to neurological deficits. The purpose of this video is to demonstrate the interdisciplinary management of a rare case of an atlas fracture in pregnancy.

Methods: We report a case of a 38-year-old G3P1, presenting at our emergency room with severe neck pain after collapsing and falling with her neck on the back of a chair at home. There were no signs of paresthesia or functional loss. Previous obstetric history included one at term delivery and one early miscarriage. There was no history of medical disorders or drug intake.

Results: After stabilization and first aid through the paramedics the patient was delivered to the hospital. The imaging, including CT and MRI scans, revealed an unstable, Jefferson type IIIb burst multifragmenting fracture without further injuries of soft tissue or the spinal canal. A Halo fixation device with a vest was applied immediately. The patient received respiratory-distress-syndrome prophylaxis, daily cardiotocography and regular ultrasound scans. Her vest had to be adjusted once, due to abdominal growth. Caesarean section was performed at 34 + 0 weeks of gestation and a healthy male was delivered. Five days after delivery dynamic osteosynthesis with dorsal screw-plate-system was performed. The postoperative CT scans revealed no signs of inflammation, loosening of the pedicle screws, foraminal or spinal stenosis and the patient was discharged on the seventh postoperative day with a hard cervical collar. In the follow-up the patient presented fully recovered without residual sensorimotor deficits.

Conclusion: An effective interdisciplinary emergency management is crucial for an optimal obstetric and orthopedic outcome of complicated atlas fractures in pregnancy.

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High-volume hospitals- what is most beneficial for patients diagnosed with ovarian cancer?

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Epithelial ovarian cancer (EOC) most often manifests itself in an advanced stage and is the second most common cause of death in women from gynaecological malignancies. The relationship between treatment in high-volume hospitals (HVHs) and survival in OC has been documented by multiple studies, which showed that superior treatment and survival outcomes are associated with surgical expertise and multi-

disciplinary resources. Our paper discusses the treatment results of patients with epithelial ovarian cancer in one centre.

To our study, we enrolled 291 first-time patients treated in 2018-2021 in the Department of Oncology of Poznań University of Medical Sciences.

The relation between starting treatment in HVH and the type of the first intervention and final decision was significant ($p < 0.001$). A Multivariate Cox regression model was built by a step method. The left variables were the stage of the disease (FIGO; $p = 0.071$), histopathology ($p = 0.079$), final decision- primary debulking surgery (PDS) vs neoadjuvant chemotherapy (NACT) after laparotomy and stage of the cytoreduction (R1 vs R0 $p = 0.005$, and R2 vs R0 $p = 0.020$). Subjects treated with NACT had a 1.99- 2.81- times higher risk of relapsing than subjects who had PDS as the final decision (95% CI for HR = 1.58-4.98; $p < 0.001$ for NACT after laparotomy and 1.17-3.39; $p = 0.011$ for NACT after a laparoscopy). Stage R1 of cytoreduction increased the risk of relapsing 2.43 times (95% CI for HR = 1.30-4.56; $p = 0.005$), and stage R2 increased that risk 1.96 times (95% CI for HR = 1.11-3.46; $p = 0.020$) relating to R0.

Patients benefit most from PDS at a centre with the most experience. However, it should be remembered that in situations where treatment in HVH is not possible, physicians should offer the highest standards of care.

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Evaluation of the antioxidant system and oxidative stress in the blood cell lysate of pregnant patients with physiological pregnancy and gestational diabetes

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Reactive oxygen species are chemical compounds that contain oxygen atoms with an unpaired electron or O-O bonds in their structure, which makes them very easy to enter into a variety of chemical reactions. Under conditions of homeostasis, the reactivity of these compounds is tightly controlled and needed for many physiological processes, such as energy production in mitochondria, apoptosis, proliferation, migration, blood clotting and many, many others. Oxidation-antioxidant balance, or the antioxidant system and its parameters, allows to keep the concentrations of reactive forms and antioxidant factors in a state of dynamic equilibrium, which allows to inhibit the destructive effects of the former.

The purpose of this study is to evaluate the oxidative system and intracellular oxidative stress in red blood cell lysate in patients with physiological pregnancy and complicated gestational diabetes mellitus (GDM).

In 45 pregnant women with GDM and 35 pregnant women with physiological pregnancies, the activity of 7 variables that are parameters of the oxidative system in the blood of pregnant women was examined. These included: superoxide dismutase (SOD) activity, glutathione reductase (GR) activity, catalase (CAT) activity, glutathione peroxidase (GPX), glutathione transferase (GST) activity, lipofuscin content per gram of hemoglobin (LPS/g Hb), malondialdehyde content per gram of hemoglobin (MDA/gHb).

The group of women with GDM compared to the control group showed statistically significant differences in catalase concentrations and activities per gram of hemoglobin [CAT] (554.6613 kIU/g Hb vs. 367.4180 kIU/g Hb; $p = 0.000001$), glutathione peroxidase activity per gram of hemoglobin [GPX] (43.7545 IU/g Hb vs. 57.9117 IU/g Hb; $p = 0.000039$), lipofuscin concentration per gram of hemoglobin [LPS] (1333.5761 RF/g Hb vs. 897.4698 RF/g Hb; $p = 0.000005$) and malondialdehyde concentration per gram of hemoglobin [MDA] (0.5478 μmol/g Hb vs. 0.7124 μmol/g Hb; $p = 0.000016$).

Changes in the activity of the above-mentioned parameters may be a predictive marker for gestational diabetes.

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Management of ectopic tubal pregnancy: experience of a tertiary center in Lithuania

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Introduction and aims: Formerly the main ectopic tubal pregnancy (TP) treatment method was surgery but in current practice methotrexate (MTX) therapy may be preferred for selected women. We aimed to analyse treatment methods of TP and their effectiveness at the Department of Obstetrics and Gynaecology, Lithuanian University of Health Sciences which is the only center in Lithuania that provides MTX therapy for TP.

Methods: A prospective analysis was conducted from 1st of January 2021 to 31st of December 2022. All women were divided into 3 groups depending on the TP treatment method: expectant management, MTX therapy and surgery. Data collected from medical records and completed patient questionnaires included management method, its effectiveness and human chorionic gonadotropin (HCG) dynamics until unreachable level.

Results: A total of 121 women were included in this study: 56 (46.3%) undergone surgery, 48 (39.7%) were eligible for MTX therapy and 17 (14.0%) had expectant management. Follow-up questionnaire was completed by 90 women (response rate-74.4%). Other treatment approach was required for 16 women. MTX therapy was necessary for 7 women and 1 required surgical approach in the expectant management group (effectiveness-52.9%), 7 women required surgery after MTX therapy (effectiveness-85.4%) and 1 woman needed re-operation because of heavy internal bleeding after surgery (effectiveness-98.2%). A total of 71 women followed hCG dynamics until the level was undetectable. The average time in weeks did not differ between groups ($p = 0.101$) and was 4.3 ± 1.3 for expectant management, 4.9 ± 2.3 for MTX therapy and 3.6 ± 2.0 for surgery.

Conclusions: More than half (53.7%) women with TP received conservative management approach which was effective in 3 out of 4 women. The most effective approach was surgical. The average time in weeks until hCG reached undetectable level did not differ between treatment methods.

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Distribution of lactobacillus spp. in the vaginal microbiome of women with an abnormal cervical cytology result

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The composition of the vaginal microbiota in asymptomatic women consists mainly of Lactobacillus spp. and plays an important role in maintaining the stability of vaginal microenvironment. Researchers have spotted a possible link between the vaginal microbiome and gynecological neoplasms. There have been several recent studies that have shown a potential correlation between the vaginal microbiome and the risk of developing cervical cancer from human papillomavirus (HPV) infection.

The aim of this study was to compare prevalence and quantity of different Lactobacillus species in vaginal swabs from healthy controls and patients with abnormalities in cytological tests. Vaginal swabs were taken from 100 women participated in the study (79 patients with abnormal cytology results and 21 women from the control group). DNA isolated from these swabs was used in real-time quantitative PCR to specify the species of Lactobacillus and their amounts.

Most of the patients enrolled in the study were colonized by two Lactobacillus species, mainly L. gasseri (93%) and L. crispatus (83%). The place of residence and the age of the patients were related to the diversity of Lactobacillus spp. in the vaginal microbiome. L. acidophilus and L. fermentum were detected much more frequently in patients living in the countryside than in the cities. The study showed that the amount of L. delbrueckii in the vaginal microbiome increased with age while L. gasseri decreased with age.

Statistical elaboration of the results showed no significant differences in Lactobacillus spp. between the groups of patients with abnormalities in cervical cytology.

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Outcome after prenatal diagnosis of trisomy 13, 18, and 21 in fetuses with congenital heart disease

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Introduction and aims of the study: Fetal congenital heart disease (CHD) is often associated with chromosomal abnormalities. Besides the increased risk of infant morbidity and mortality, fetuses with CHD carry an increased risk of intrauterine fetal death (IUFD). Our primary aim was to assess stillbirth and neonatal mortality rates for pregnancies complicated by trisomies 13, 18, and 21 in the presence of CHD. The secondary aims were to investigate maternal morbidity in these pregnancies, and to study the gestational or neonatal age when mortality occurred.

Methods: This is a retrospective cohort study from a single tertiary referral center for feto-maternal medicine during 2000-2020. Inclusion criteria were the prenatal diagnosis of at least one structural CHD, together with prenatally diagnosed fetal trisomy 13, 18, or 21 by genetic analysis.

Results: One-hundred and sixty patients with fetal trisomy 13 (14.4%), fetal trisomy 18 (28.8%), and fetal trisomy 21 (56.9%) were evaluated. In total, 98 (61.3%) families opted for the termination of pregnancy (TOP). Of the remaining 62 (38.8%) pregnancies, 16 (25.8%) resulted in intrauterine fetal death/death during delivery. Ten out of twenty-one (47.6%) infants with trisomy 13 or 18 were born alive. The livebirth rate was 87.8% (36/41) for infants with trisomy 21. Early neonatal death was observed in nine (19.6%) infants. Thirty-one (86.1%) infants with trisomy 21 survived the first year of life.

Conclusion: Fetuses with CHD and trisomy 13 or 18 may survive until term delivery, with a high risk of neonatal mortality. Fetal trisomy 21 and CHD are associated with higher IUFD rates. These data may be helpful for counseling affected parents when the decision to terminate or continue the pregnancy should be considered.

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Dequalinium chloride for the treatment of vulvovaginal infections: A systematic review and meta-analysis

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Background and Aims: Women at reproductive age frequently experience vaginal dysbiosis and infection. The most common etiologies are vulvovaginal candidosis (VVC), bacterial vaginosis (BV), aerobic vaginitis (AV), and trichomoniasis. Multiple treatment options are available for these infections. Dequalinium chloride (DQC) is a local disinfectant with a broad antimicrobial and antifungal spectrum. Multiple studies have shown that DQC is efficient in treating vaginal infections; however, it is not widely recommended as a first-line treatment. This systematic review and meta-analysis aims to evaluate the efficacy of DQC compared to that of standard treatment.

Methods: This review and meta-analysis was conducted according to the PRISMA-Guidelines. PubMed/MEDLINE, EMBASE, CENTRAL, and clinicaltrials.org were searched to retrieve relevant reports up to October 2022. Narrative data synthesis was the primary reporting method, additionally a meta-analysis was conducted.

Results: Four randomized controlled studies and one observational study were included in this review. Overall, DQC showed non-inferiority to the standard treatment for BV, VVC, and AV treatment. The efficacy of DQC in treating VVC and BV could also be confirmed in a meta-analysis. No serious adverse events were reported in any of these studies.

Conclusion: DQC offers a safe, well-tolerated, and efficient treatment option for vulvovaginal infections of different etiologies and should therefore be included in the current treatment guidelines.

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Ultrasound assessment of fetal head-perineum distance and cervical length to predict the success of labour induction

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Introduction and aims of the study: Induction of labour (IOL) is one of the most frequent obstetric procedures. Successful IOL results in a vaginal delivery, either spontaneous or operative. The Bishop score remains a gold standard for assessing suitability for IOL and ultrasound measurements may be added to the list. The study aims to evaluate ultrasound measurements of fetal head-perineum distance and cervical length as predictive factors for the success of IOL.

Methods: The project "Role of Metabolome, Biomarkers and Ultrasound Parameters in Successful Labour Induction" started implementation in Riga Maternity Hospital in January 2021. Fifty nulliparous women with singleton term pregnancy, cephalic presentation, intact membranes and a Bishop score of 6 or less with an indication for IOL were included. An ultrasound examination was performed before labour induction. IOL consisted of combined method with misoprostol and mechanical dilatation of cervix with Foley catheter.

Results: The mean cervical length was 2.53cm (range 1.05 to 4.75cm). The mean fetal head-perineum distance was 5.08cm (range 3.52 to 7.29cm). Out of 50 patients, 90.0% (n = 45) had successful IOL- vaginal delivery, 10.0% (n = 5) had Caesarean section. The ROC analysis identified that cervical length < 2.56cm (AUC = 51.6%) and fetal head-perineum distance < 5.26cm (AUC = 41.7%) were cut-off levels to predict vaginal delivery. The success rate of IOL among women with cervical length < 2.56cm was 88.0% (n = 22) and 96.5% (n = 28) among women with fetal head-perineum distance < 5.26cm.

Conclusions: Alternative measures to predict the success of labour induction should be studied. Ultrasound examination is a safe and non-invasive method that has been shown to provide valuable objective measurements.

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Risk factors for reproductive health disorders after operative delivery

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Introduction: Caesarean section rate in Eastern European countries is about 40%. A significant complication is a scar defect on the uterus, isthmocele or niche, which is detected in 24–70% of cases during ultrasonographic examination. There is no unanimous opinion on the mechanism of formation, site of incision, number of previous cesarean sections, suturing technique and maternal comorbidities, such as diabetes may all play a role.

The aim of the work was to find risk factors for isthmocele formation after operative delivery.

Methods: The medical documentation of childbirth of 100 patients was analyzed, where in 60 cases a scar defect on the uterus was found (the main group), which made it possible to analyze the parameters of the comparison group (40 patients) without sonographic signs of isthmocel. Statistical processing of the material was carried out with the help of the Microsoft Excel application program using the "Statistica - 6.0" package. The analysis of medical records allowed us to identify the following risk factors: two or more cesarean sections (43.3%), retroflexion of the uterus (63.3%), young age of the woman under 19 years (20.0%), performing the operation in the second period of labor (56.7%), large fetus at birth (26.7%), surgical intervention technique (incision localization, suturing technique) (23.3%), body mass index (36.7%), gestational diabetes (16,7%), infectious complications in the postpartum period (20.0%).

Conclusion: The use of multivariate analysis made it possible to establish the most significant risk factors for isthmocele after operative delivery: high parity of Caesarean section (OR- 4.33, 95%; CI (1.58–11.86), low maternal body mass index (OR- 2.73 , 95% CI (1.03–7.19) and gestational diabetes (OR- 7.80, 95% CI (1.0–63.56), prolonged labor and operative delivery in the second period (OR- 6.16 , 95% CI 2.35–6.14), as well as an infectious factor in the postpartum period.

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Predictors of effectiveness in the medical treatment of early abortion with misoprostol: development of a nomogram to estimate the individual probability of therapy failure

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Introduction and aims of the study: Early spontaneous abortion is the most frequent complication of pregnancy. If early complete miscarriage is a self-healing pathology, incomplete and retained abortion are common conditions for which millions of women need hospitalization and treatment. The pharmacological induction of the expulsion of the abortion relies on the use of Misoprostol, a prostaglandin E1 analogue. However, medical treatment is significantly less effective than surgery. Our aim is to create a predictive model, suitable to be transformed into a tool for the clinical practice, able to estimate the individual probability of failure of the Misoprostol treatment.

Methods: Examination of patients hospitalized for medical treatment of incomplete or retained abortion. Screening of potential predictors able to influence the outcome of the medical treatment.

Selection of a series of predictors among those available from the consultation of medical records.

Results and/or discussion: The presence of minor clinical symptoms in the previous 7 days before treatments, the use of hormonal contraceptive for a long period and/or more than 5 years continuously were variables that were significantly more present in the group of patients who achieved a complete emptying of the uterine cavity with Misoprostol.

Conversely, the presence of a multiple pregnancy, medically assisted procreation techniques pregnancies, and/or progesterone supplementation in the first trimester for a duration of at least two weeks, were

parameters significantly more common among the patients who had to undergo surgery due to the lack of efficacy of the Misoprostol treatment.

Conclusions: According to our model, the highest risk of failure is obtained in a patient who has never had minor clinical symptoms, undergone progesterone therapy and who has never taken hormonal therapy.

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Cervical sonoelastography as a tool for prediction of success of labour induction at term

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Introduction and Aims of the Study: The frequency of induction of labour (IOL) is rising in obstetrical practice. Specialists search for objective and reliable methods to predict success of IOL.

Aim: to evaluate role of cervical strain elastography in prediction of IOL success.

Methods: The study enrolled 50 patients in Riga Maternity hospital from June'22-January'23. The inclusion criteria: healthy primiparas with singleton pregnancy, cephalic presentation, intact membranes and Bishop score ≤ 6. IOL Method - Foley catheter combined with oral misoprostol.

Cervical tissue strain elastogram was performed on GE Versana Premier ultrasound machine, with transvaginal E8CS probe. The cervical elasticity index (EI) was evaluated based on color map in 3 regions – internal os, cervical canal, and external os. Cervical tissue was rated according to color map: red (soft), yellow (medium soft), green (medium hard), and blue (hard).

Descriptive statistical analysis was carried out using IBM SPSS 24.0 software. Significance level for ANOVA and chi-square tests, denoted by the alpha of 0.05.

Results: The median age of patients was 28 (IQR 6) years, median gestational week 41 + 1 (IQR 1), median BMI 21.1 (IQR 4.2). Vaginal delivery (VD) was achieved in 90% (n = 45): spontaneous VD - 64% (n = 32), operative VD - 26% (n = 13). Cesarean section - 10% (n = 5) of cases. Active labour within 12 hours - 90% (n = 45) of cases, and VD within 24 hours - a 86.6% (n = 39). No statistically significant association was found between EI cervical regions and mode of delivery. The drawbacks of the study might be small sample size.

Conclusion: Elastography is a novel method to use in prediction of IOL success, and continuous research in larger population is needed.

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Assessment of h3k27me3 level in the tet1 promoter region in eutopic endometrium of women with endometriosis and infertility

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Introduction: Endometriosis is a complex gynecological clinical syndrome that causes infertility. The pathomechanism of infertility in endometriosis is unclear. In infertile patients with endometriosis, reduced expression of the TET1 gene was found in the eutopic endometrium. The role of histone modifications in the TET1 promoter region in regulating its expression in infertile endometriosis patients is unknown.

Objective: Assessment of the level of repressive histone modification H3K27me3 in the promoter region of the TET1 gene in the eutopic endometrium of infertile and fertile patients with and without endometriosis.

Material and methods: The study included 18 patients with and 13 patients without endometriosis. The patients were additionally divided according to their fertility status into fertile and infertile women. The research material was eutopic endometrium. H3K27me3 levels were assessed in three regions of the TET1 promoter (within and outside the CpG Island). Chromatin immunoprecipitation (ChIP) was used to assessment the occurrence of H3K27me3 in the TET1 gene. The statistically significant value was $p < 0.05$.

Results: The level of H3K27me3 in three different regions of the TET1 promoter have not differed between patients with and without endometriosis. Alterations in the level of H3K27me3 were also not found between fertile and infertile women. The analysis of a smaller number of cases only for high-efficiency ChIP (validated by postitve controls for H3K27me3) indicated a significantly higher level of H3K27me3 in the group of infertile women with endometriosis compared to the control group ($p = 0.037$).

Conclusions: 1. The level of histone repressive modification H3K27me3 in the TET1 promoter region is not a probable factor regulating the expression of the TET1 in a group of patients with endometriosis.2. The level of H3K27me3 in the TET1 promoter does not depend on female fertility, regardless of the coexistence of endometriosis.3. High-efficiency ChIP analysis on a larger group of patients may give more accurate results.

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The impact of androgens in the Intrafollicular Endocrine Milieu in follicular fluid in four different protocols: HMG,HMG/hCG,rFSH, rFSH/hCG

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Context: The role of different preparation of gonadotropins on the intrafollicular hormonal profile in the follicular fluid has been studied.

Objective: The objective of the study was to assess the impact on hormonal profile of Progesterone, Testosterone, Androstenedione, HCG, FSH and E2, in Follicular Fluids (FFs) using different preparation of gonadotropins for control ovarian stimulation.

Setting: This was a prospective study conducted at Fertility Institute

Patients: From 94 in vitro fertilization patients, FFs were pooled for each patient for analyses.

Interventions: Patients were treated using a GnRH antagonist protocol HMG,HMG/hCG,rFSH, and rFSH /hCG

Main Outcome Measure: The three principal aims of the present study were: (1) to evaluate whether the composition of difference gonadotropins preparation and were influenced by ovarian stimulation protocol . (2) To relate hormonal FF profile with the ovulation induction parameters and (3). To assess the quality of embryos and the pregnancy rate regarding the protocol and FF hormonal profile.

For this purpose, intrafollicular hormone concentrations in relation to treatment groups, follicular sizes, number of oocytes, maturation rate of oocytes embryo quality and pregnancy rate were examined.

Results: The main differences in the comparison of the four groups were significantly higher concentration in the FF of Testosterone , Androstenedione and FSH ,in the groups with LH/hCG activity (p <o, ooo).While the concentration of progesterone and E2 was similar in all groups(p 0,275 and p 0,435 respectively). The higher statistical significant ratio was found in rFSH group in the following combination Prg/Test,Prg/D4,Prg/E2,hCG/FSH, hCG/E2, FSH/E2. In the HMG and rFSH groups with the highest pregnancy rate, the hormonal profile in ff was analyzed in those who became pregnant and non-pregnant. In the HMG group progesterone and hCG were statistically lower in pregnant women. While in the rFSH group the progesterone level also was statistically lower in the pregnant group.

Conclusions: We conclude that the androgenic environment of the FF creates the conditions to produce viable embryo. Mainly when in the protocol there is activity of LH the micro environment of the FF is optimum for the production embryos with the potential to implant. In the composition of follicular fluid in HMG and rFSH groups who became pregnant we found significant lower progesterone level in the FF . However, in both regimes HMG and rFSH indicated that the low concentration of progesterone in FF has a positive impact for implantation.

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Renal colic during pregnancy – Maternal complications and perinatal outcomes

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Introduction and objectives of the study: Renal colic during pregnancy is common non-obstetric cause for urgent hospital admission and is associated with increased risk of maternal complications and adverse perinatal outcomes.

The objective of the study was to assess the incidence of fetal and maternal complications in a group of pregnant women affected by renal colic.

Methods: A retrospective single-center observational study on pregnant women affected by renal colic hospitalized in our tertiary care unit in the years 2017-2022 with a known perinatal outcome. Renal colic was defined as acute pain in the sacrolumbar region with positive Goldflamm sign or ultrasound findings of hydronephrosis or urolithiasis. Exclusion criteria comprised pre-gestational diabetes mellitus or hypertension, multiple pregnancy, as well as fetal chromosomal or structural abnormalities.

Results: A total of 33 patients were included. The mean maternal and gestational age at the time of first renal colic manifestation was 21.9 years (SD 4.7 years) and 31.1 gestational weeks (SD 4.3 weeks), respectively. The mean gestational age at delivery was 37.6 weeks (SD 2.0 weeks).

Maternal complications included pregnancy-induced hypertension (9%; 3/33), gestational diabetes mellitus (21%; 7/33), anemia (36.3%; 12/33), acute pyelonephritis (6%; 2/33), sepsis (3%; 1/33). Adverse perinatal outcome occurred in 15% and comprised: preterm delivery (9%; 3/33), premature rupture of membranes (3%; 1/33), low birth weight (<5 pc) (3%; 1/33).

Conclusions: The incidence of maternal complications and adverse perinatal outcomes in our study on pregnant woman affected by renal colic was higher than in general pregnant population. These preliminary results need to be confirmed on larger group of patients.

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Audit of referrals to the colposcopy clinic at mater dei hospital in Malta

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Introduction and aims of the audit: The Colposcopy Clinic Service provided by the Obstetrics & Gynaecology Department at Mater Dei Hospital in Malta was introduced in 2018. Ever since, hundreds of referrals were received and investigated. The aim was to analyse these referrals, assess their appropriateness and provide recommendations to render the service more focused, timely and cost-effective.

Methods: This audit involved retrospective analysis of 256 patients (age ranging between 18 & 72) referred to the Colposcopy Clinic between July 2018 and May 2021. These were then compared to the local standard guideline according to the reason for referral.

Results: The detection of Low-grade Squamous Intraepithelial Lesion (LSIL) on Pap Smear contributed to 56.6% of the audited referrals. 58% of the analysed cases were deemed to be premature and this was mostly the case for patients with an initial smear revealing Atypical Squamous Cells of undetermined Significance (ASCUS) and LSIL.

Discussion: Given that Human Papilloma Virus (HPV) is the commonest sexually transmitted infection, it is indisputable that the Colposcopy Clinic has been crucial in detecting and guiding further management of both early and advanced cervical lesions and hence preventing progression to more serious disease. Nonetheless, this audit has conveyed the unnecessary burden on the infrastructure due to over-investigation in view of a significant number of premature referrals. The results were thus instrumental in shaping recommendations to improve the service by directing the available human and material resources adequately to the high-risk cohort.

Conclusions: The most vital recommendations include advocation of HPV Vaccination amongst all women aged 12 and over, and prioritisation of referred cases according to the severity of the smear and the types of HPVs detected. Finally, the provision of tools which aid reinforcement

of the guideline and adherence to it when considering referral, is considered key.

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Robotic-assisted hysterectomy versus laparoscopic hysterectomy: Is it worth it?

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Objective: The purpose of our study was to compare the short-term clinical outcomes of robotic-assisted hysterectomy vs conventional laparoscopic hysterectomy for early stages of endometrial cancer and benign diseases in terms of estimated blood loss (EBL) and 24-hour hemoglobin and hematocrit decrease.

Material and methods: We analyzed the medical records of 80 patients who underwent robotic hysterectomy (n = 33) or laparoscopic hysterectomy (n = 47). 38 of patients were diagnosed with endometrial cancer and 42 with benign condition. Decrease in hemoglobin concentration and hematocrit within 24 hours after surgery, perioperative blood loss (PBL), drainage use and EBL (PBL + daily drainage value) were analyzed.

Results: Decrease in 24h postoperative hemoglobin levels compared to preoperative hemoglobin levels was lower in the robotic group with median(IQR) = 0,95mg/dl (0,4;1,3) vs 1,3mg/dl (IQR 0,8;2,1) in the laparoscopic group, p = 0.044 . The decrease in perioperative hematocrit was comparable in both groups with median (IQR) = 3,25 (2,05;4,35) in the study group vs 3,8 (2,9;6,4) in the control group, p = 0,29. PBL was lower in the robotic cohort in comparison with the laparoscopic procedures -median (IQR) = 180ml (100;200) vs 250ml (150;300), p = 0.02. Moreover EBL was lower in the robotic hysterectomy group with median(IQR) = 200ml (110;250) compared to the laparoscopic hysterectomy group = 260 ml(160;400) p = 0.023. Surgical procedures were performed because of endometrial cancer, in 38 patients (47.5%), including 27 (81.82%) in the study group and 11 (23.4%) in the control group.

Conclusion: Robotic-assisted hysterectomy, characterized by increased accuracy and precision, as a novel operative method is associated with less blood loss in comparison to corresponding laparoscopic procedure. Prospective, randomized studies are needed for further establishing the role of robotic laparoscopy in the surgical treatment of gynecological conditions, particularly endometrial cancer.

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A giant mucinous borderline ovarian tumour. A caese report

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Introduction: Nowadays huge ovarian tumours are rare findings due to the widespread use of ultrasound or other radiological imaging in medical practice. In some cases undiagnosed ovarian masses can grow to gigantic sizes and even cause life-threatening complications.

Presentation of case: We report a case of a 62-year-old woman who was presented with an enlarged abdomen and shortness of breath. A CT scan revealed a large multilocular cystic mass occupying most of the abdomen, bilateral pulmonary embolism and pleural effusion. The patient underwent a laparotomy where a 29,3 kg cystic mass was removed. The histopathological report showed a mucinous borderline ovarian tumour.

Discussion: Borderline ovarian tumours account for 15% of epithelial ovarian tumours and are more common in women of younger age. If giant ovarian lesion occurs in postmenopausal women, it can bring a lot of physiological and surgical challenges.

Conclusion: This report demonstrates the importance of early detection of ovarian lesions in postmenopausal patients to avoid serious health consequences.

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Mesenchymal Stromal/Stem Cells, Obesity and the Tumor Microenvironment: Spatial regulation and function of cancer-educated mammary adipose tissue-derived stromal/stem cells in breast cancer

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Background: The dramatic increase in the prevalence of obesity poses a grave challenge worldwide and obesity is associated with progression of multiple malignancies including breast cancer. Breast cancer is the most frequently diagnosed cancer and a common cause of cancer-related death in women. It is well recognized that obesity is associated with an enhanced risk of more aggressive breast cancer as well as reduced patient survival. Obesity changes the composition, structure, and function of adipose tissue, which is associated with inflammation and metabolic dysfunction. Interestingly, adipose tissue is rich in ASCs/MSCs, and obesity alters the properties and functions of these cells. As a key component of the mammary stroma, ASCs play essential roles in the breast cancer microenvironment. The crosstalk between ASCs and breast cancer cells is multilateral and can occur both directly through cell-cell contact and indirectly via the secretome released by ASC/MSC, which is considered to be the main effector of their supportive, angiogenic, and immunomodulatory functions.

Methods: In the present work, we isolated bASCs from adipose tissues adjacent to the tumor (aT bASCs) from lean- (ln-aT bASCs, BMI $\leq$ 25) and obese breast cancer patients (ob-aT bASCs, BMI $\geq$ 35), and analyzed their phenotypes with functional assays and RNA sequencing from the whole transcriptome, compared to their control counterparts isolated from adipose tissues distant from the tumor (dT bASCs).

Results: We show that ln-aT bASCs are susceptible to be transformed into an inflammatory cancer-associated phenotype, whereas ob-aT bASCs are prone to be cancer-educated into a myofibroblastic phenotype. Both ln-aT- and ob-aT bASCs compromise their physiological adipo-, osteo- and chondrogenic differentiation capacity, and upregulate metastasis-promoting factors such as CC-chemokine-ligand 2, C-X-C

motif ligand 1-3 and interleukin 6. While ln-aT bASCs, but not their distant counterparts, stimulate proliferation, motility and chemoresistance towards tamoxifen and docetaxel by inducing epithelial-mesenchymal transition of low malignant BT474 and MCF7 breast cancer cells, ob-aT bASCs trigger more efficiently a cancer stem cell phenotype in highly malignant MDA-MB-231 cells.

Conclusion: These data highlight that the breast cancer-associated ASCs are able to foster malignancy of breast cancer cells by multiple mechanisms, especially, dedifferentiation into cancer-associated fibroblast-like phenotypes, induction of the epithelial-mesenchymal transition and activation of stemness-associated genes in breast cancer cells. Blocking the de-differentiation of bASCs in the tumor microenvironment could be a novel strategy to develop an effective intervention for breast cancer patients.

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Does gonadotropin-releasing hormone agonist administration before assisted reproduction techniques improve pregnancy rates in women with endometriosis?

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Introduction and aims of the study: Endometriosis and infertility are closely related through various pathogenetic mechanisms. Endometriosis has been traditionally considered to negatively affect fundamental aspects of the IVF-FET procedure. Various interventions, both medical and surgical, have been proposed in order to improve IVF success rates in endometriosis cases. Axial down-regulation with a 3-6 month administration of GnRH-agonists prior to ART initiation has been postulated to improve clinical pregnancy rates through means of reduced inflammation, improved oocyte quality and restored endometrial receptivity. The aim of this study is to clarify whether GnRH-a administration prior to IVF-FET procedures improves pregnancy rates in women with endometriosis.

Methods: Literature review in Medline (PubMed), Cochrane and Google Scholar concluded on September 10, 2022.

Results: Two Cochrane meta-analyses and 16 selected studies present various interesting data of ART procedures on patients with endometriosis-related infertility with or without depot GnRH-a pretreatment.

Conclusion: Use of GnRH-a prior to IVF is not routinely recommended in order to improve pregnancy rates in women with endometriosis. The regime may have a positive clinical effect on cases of severe disease, but further investigation of their actual benefit and mechanism of action is considered essential. Personalised counselling and well designed clinical trials regarding the role of GnRH-a in IVF pose future goals that warrant immediate attention.

*IVF-FET: In vitro fertilisation-Frozen Embryo Transfer, GnRH-a: Gonadotropin-Releasing Hormone agonist, ART: Assisted Reproduction Techniques

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An unusual presentation of acute pancreatitis associated with primary hyperparathyroidism in pregnant woman

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Introduction: Pancreatitis is a relatively rare condition amongst pregnant women and it is usually associated with gallstones. The aim of this case report is to present the unusual cause of the disease and stressed the importance of proper diagnosis.

Case presentation: The patient was 30-years old woman during 28 week of pregnancy whodemonstrated severe abdominal pain with vomiting. In the past she experienced acute pancreatitis of idiopathic cause. During hospitalization several tests were performed with some significant findings including elevated values of CRP, alpha-amylase, lipase and calcium. Additionally, the ultrasound examinations revealed abnormal image of the pancreas and the suspicion of adenoma in parathyroid gland that was not confirmed in MRI. Based on the presented symptoms and the results of various test, the diagnosis of severe acute pancreatitis associated with hyperparathyroidism was made. Initially, the patient was treated conservatively. She was also given cinacalcet to reduce the concentration of parathyroid hormone, but the effect was unsatisfactory. The patient required several specialistic consultations due to bizarre symptoms. Eventually, she underwent the surgical removal of the suspicious thyroid gland. The adenoma was confirmed in the histopathological examination. After the surgery the patient's condition was gradually improving. During the treatment the fetal state was closely monitored. The fetal development was normal but there were some abnormalities in the image of placenta. The pregnancy was terminated with C-section because of the symptoms of acute infection in 34 weeks of gestation.

Conclusions: Primary hyperparathyroidism is a very rare cause of pancreatitis and the proper diagnosis may be difficult especially during pregnancy as the diagnostic and treatment procedures are limited. The importance of hypercalcemia should be underlined as it might cause maternal and fetal complications. Early detection of that pathology is crucial.

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Risks and benefits of hormone replacement therapy in reproductive age women after hematopoietic stem cell transplants: a narrative review

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Introduction and aims of the study: Haematopoietic stem cell transplantation increases survival for hematologic malignancies, but increasing numbers of survivors struggle with the side effects. For women with established primary ovarian failure, the question of whether menopausal

or contraceptive hormone treatments are more beneficial remains unanswered because no comparative studies have been conducted. The aim of this study was to summarise the main benefits and risks of menopausal hormone therapy for patients who have undergone haematopoietic stem cell transplantation.

Methods: A literature review was conducted to examine hormone replacement therapy in reproductive women after hematopoietic stem cell transplantation. Twenty papers were selected from approximately 142 abstracts using the Pubmed search engine.

Discussion: Menopausal hormone therapy is recommended for symptomatic women after stem cell transplantation who have vasomotor symptoms, vulvovaginal symptoms, sleep and mood disturbances. The lowest dose that relieves symptoms is recommended and should be started at least 3-6 months after stem cell transplant when the patient is stable. Menopausal hormone therapy is better than no therapy for the prevention of osteoporosis. Although for reproductive age women the oral contraceptive pill may be more familiar, for long term survivors of hematopoietic stem cell transplant, it may be associated with a higher incidence of complications such as venous thromboembolism, therefore menopausal hormone therapy should be considered. Contraindications such as estrogen-sensitive tumors, active liver disease, unacceptable risk of venous thromboembolism, or patient preference should be considered.

Conclusions: More information is needed on the duration of menopausal hormone treatment in haematopoietic stem cell transplant patients. The safety of hormone treatment for this population needs to be established, but the difficulty of data interpretation remains. Specific guidelines need to be developed.

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Misoprostol – effectiveness, safety and efficacious dose in first trimester miscarriages

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Introduction and aims of the study: The aim of following study was to assess safety and effectiveness of misoprostol usage in miscarriages before 14 weeks of gestation, in distinction between diagnosis such as blighted ovum, missed abortion and incomplete abortion.

Methods: A retrospective cohort study was carried out among patients hospitalized in Department of Obstetrics and Pathology of Pregnancy, Medical University of Lublin, due to early pregnancy loss. Fifty-nine women diagnosed with first trimester miscarriage, confirmed by at least two independent ultrasonographers, were qualified for pharmacological treatment. The dose of administered misoprostol was calculated accordingly to FIGO Misoprostol-Only Recommended Regiments 2017. Successful treatment was defined as spontaneous expulsion of conception products. If abortion was not completed after 48 hours of pharmacological treatment, curettage under anesthesia was performed. All side effects and long-term complications were enrolled in medical record.

Results: Over two-thirds of women included in this research underwent the process of successful pharmacological abortion. Mean effective dose for successful outcome was 2141 micrograms (min. 400mcg; max. 4800mcg), for blighted ovum it was 1450mcg (min. 400mcg; max. 2000mcg), for missed abortion – 2313mcg (min. 600mcg; max. 4800mcg), incomplete abortion – 1750mcg (min. 600mcg; max. 400mcg). The highest rate of effective abortions (80%) was for the diagnosis of incomplete abortion. Blighted ovum marked the lowest efficacious doses. The average length of hospitalization was 2.4 days, whereas the same indicator for successful abortions only was 2.1 days. Retrospectively no major side effects of misoprostol administration were observed. Two patients required rehospitalization due to late complications of the treatment.

Conclusions: Pharmacologically induced abortion with use of misoprostol is safe and effective method for first trimester miscarriages treatment. It allows patient to avoid an invasive procedure such as curettage and prevents from side effects of anesthesia.

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Identification of mirna panel in endometriosis and ovarian cancer to understand the etiopathogenesis of endometriosis associated ovarian cancer

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Introduction and aim of the study: Endometriosis is one of the most common gynaecological diseases affecting approximately 6-10% of women in reproductive age. It is often associated with chronic pelvic pain syndrome and infertility. Despite its benign character it poses a 0,7-1% risk of malignant transformation particularly due to ovarian endometriosis. Endometriosis associated ovarian cancer (EAOC) consisting of endometrioid cancer and clear cell ovarian cancer could be promoted by many factors. miRNAs which are small, non-coding molecules of RNA are among them. The aim of this study was to detect miRNAs connected with malignant transformation of endometriosis.

Methods: FFPE (formalin fixed paraffin embedded) of 179 patients operated on endometriosis and different types of ovarian cancer were studied. From expression panel of 754 miRNAs, 7 were choosen for further tests according their ROC curves: miR-1-3p, miR-125b-1-3p, miR-31-3p, miR-200b-3p, miR-502, miR-503, miR-548d. Furthermore, other potentially important clinical data were analysed, which included: age, BMI, Ca125 concentration, miscarriages and deliveries, concomitant diseases such as hypertension, type 2 diabetes and smoking.

Results: Examined miRNA panel distinguished significantly different types of endometriosis, normal ovarian tissue and endometriosis, normal ovarian tissue and cancer, endometriosis and cancer. miRNA expression was not dependent on FIGO stage or Ca125 concentration. The panel has no potential to differentiate types of ovarian cancer according to their origin.

Conclusions: Transformation in malignant cells are dependent on expression of different miRNA of pleiotropic function, therefore examination of broader miRNA panel and correlation between different miRNA molecules is needed and might prove itself advantageous in clinical practise.

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Breast cancer in young women aged 35 and under patterns of care in operated women

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Introduction: Breast cancer is one of the most common malignant tumors in women and about 2% occur before the age of 35. It has been suggested that breast cancer in young people may be biologically different compared to other age groups. The aim of this study is to review our experience in the treatment of breast cancer.

Methods: Observational, retrospective, and descriptive study that included all women who underwent surgery between 2018 and 2022 in our Senology Unit, due to breast cancer aged 35 years or less.

Results: The study included 22 young women, with a median age of 31 years. The majority (72.7%, n = 16) used combined oral contraceptives and 36.4% breastfed. Regarding family history, 8 (36.4%) had a family history of breast or gynecological cancer, and in 6 (27.3%) pathogenic mutations were identified? As for the histology of the tumor in biopsy, the majority showed invasive ductal carcinoma (86.4%; n = 19), grade III (63.6%, n = 14), positive estrogen receptors (86.4%, n = 19) and positive progesterone receptors (77.3%, n = 17). Half of the sample was HER2 positive, and the average Ki67 positivity percentage was 57.18%. About TNM staging, most were clinically classified as T2 (68.2%; n = 15) and N0 (72.7%; n = 16). A total of 16 women (72.7%) underwent neoadjuvant chemotherapy and the major intervention was tumorectomy (72.7%; n = 16), requiring axillary lymphadenectomy in 6 (27.3%). No major complications were reported, and no reintervention was performed. Radiotherapy was performed in 17 (77.3%) and adjuvant chemotherapy in 5 (22.7%) women. During the follow-up, so far, no cases of relapse have been identified.

Conclusion: Breast cancer in very young women should not be considered a rare identity. The tumor had some special characteristics, larger size, higher grade, higher incidence of axillary dissemination and high proliferative index. Despite the aggressiveness, the survival rate is high.

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Concordance of standard Hematoxylin and Eosin staining and One-step nucleic acid amplification (OSNA) in detection of metastases in sentinel lymph nodes in cervical cancer

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Introduction: One-step nucleic acid amplification (OSNA) is a method for a rapid diagnosis of the metastases in sentinel lymph nodes. Recent studies have shown that it can be an alternate method for standard Hematoxylin and Eosin staining.

Objective: To assess the effectiveness of detecting micrometastases by OSNA method compared to standard Hematoxylin and Eosin staining in cervical cancer.

Methods: 31 patients with cervical cancer (19 stage I, 6 stage II, 5 stage III, 1 stage IV) who underwent radical hysterectomy were enrolled to the study. 67 sentinel lymph nodes were removed during the surgical procedure and all of them were examined by standard Hematoxylin and Eosin staining. 65 nodes (97 %) were analyzed by OSNA.

Results: Out of analyzed 67 nodes metastases were detected in 7 nodes (10.4 %) by standard Hematoxylin and Eosin staining. Out of 60 histopathology-negative nodes, 4 (6.7 %) were positive and 2 (3.3 %) were borderline (160 to 249 cCP). Standard Hematoxylin and Eosin staining revealed 7 positive nodes, while the OSNA amplification indicated the presence of metastases in 10 nodes and showed 2 borderline nodes (160 to 249 cCP). That resulted in upstage of FIGO in 5 cases.

The concordance rate between Hematoxylin and Eosin staining and the OSNA in cervical cancer was 70 %

Conclusions: OSNA amplification method showed higher detection rate of metastases in sentinel lymph nodes compared to standard Hematoxylin and Eosin staining.

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Impact of a Couder [StQuote] s maneuver for the perineal protection

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Objective: To evaluate the impact of a Couder's maneuver on the incidence of perineal tears in spontaneous term deliveries.

Materials and method: There are two comparatives, retrospectives and identical studies in two universities maternities units were designed by the same author and included all primiparous women who delivered spontaneously after 37 weeks of gestation in cephalic presentation.

Results: A total of 2081 patients were included in the first center and 2930 in the second center. Couder's maneuver was performed in 59% and 32.12% in each center. A change in the distribution of perineal lesions was observed: the rate of intact perineum increased ($P < 0.001$), while 2nd degree lesions decreased with Couder's maneuver ($P < 0.05$). The 1st degree perineum and obstetric anal sphincter injuries remained stable.

Conclusion: A selective use of episiotomy combined with Couder's maneuver could reduce the incidence of perineal tears, particularly second-degree perineal tears, without increasing the rate of obstetrical anal sphincter injuries

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Cyst of the nuck canal - a case report and literature review

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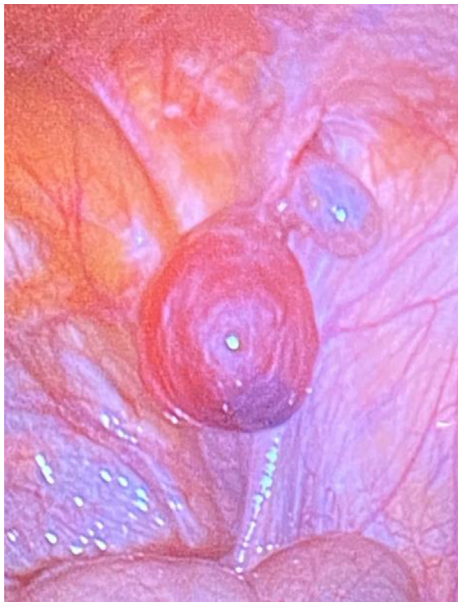
Introduction: The canal of Nuck is an embryological vestige of the processus vaginalis. Cyst of the canal of Nuck is a rare developmental disorder of the reproductive system of women and accounts for a limited number of cases of benign painless or painful swelling in the inguinal

region. As diagnoses of these masses by physical examination alone may be inconclusive, further evaluation using ultrasound or magnetic resonance imaging can help to establish definitive preoperative diagnoses and the extent of lesions.

Case presentation: A 38-year old female was admitted to our department with a painful mass in her right inguinal region. The swelling was first noticed several months ago, and the patient reported she had never suffered from regional pain before. Her medical history revealed laparoscopic enucleation of an endometrioid cyst from the right ovary. At presentation, physical examination revealed a small palpable mobile lump in the right groin. Transabdominal ultrasound revealed a 4 cm well-defined, thin-walled hypoechoic structure in her right abdomen close to the groin. Minimally invasive laparoscopic access was implemented. The cyst was dissected from the round ligament at the entry to inguinal canal and was completely excised (Figure 1). Histology confirmed the presence of Nuck cyst. The patient's postoperative course was uneventful, and she was discharged the next day.

Conclusions: Complete surgical excision of the lesion is the standard treatment for cyst of the Nuck canal. Surgical excision is effective as it is both therapeutic and diagnostic. When possible, a laparoscopic approach should be considered due to a shorter recovery period.

Figure 1. Presentation of cyst of the Nuck canal during laparoscopy.



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Interstitial pregnancy: a successful case handled with a conservative approach

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Interstitial or cornual implantation of the blastocyst is a rare condition, accounting for 2% to 3% of ectopic pregnancies. Strong clinical suspicion and early action are necessary because of the inherent high risk of uterine rupture and massive bleeding. Various treatment modalities are possible as there is no consensus for a treatment of choice.

The authors report a case of a 36-year-old woman, G3P1, with a history of a previous left ectopic tubar pregnancy surgically managed. The patient complained of transvaginal bleeding and pelvic pain associated with an amenorrhea of 6 weeks and 4 days and a beta-human chorionic gonadotropin (HCG) of 18751. Transvaginal ultrasound was performed and the diagnosis of left interstitial ectopic pregnancy was done. A conservative in-patient approach was decided using a protocol of methotrexate (1mg/kg) and leucovorin. HCG dosing was repeated on D3, D5, D7 and D14 and values progressively increased until D5 reaching a maximum of 40756. On D14 HCG levels reduced more than 15% comparing to D7, reaching the value of 15540, and we suspended the methotrexate protocol. The patient remained stable and gradually improved from complaints during treatment. On D14 she was discharged home to continue surveillance in an ambulatory regimen. HCG continued to decrease until becoming undetectable and no complications were registered during this approach.

We report a rare and potentially life-threatening situation that must be carefully handled. Interstitial pregnancies are difficult and sensitive to approach either surgically, with a risk of massive bleeding of the cornua of uterus, or through conservative approach, due to the risk of rupture, namely with high HCG levels. We describe a successful conservative approach using methotrexate and a close clinical in-patient surveillance. We highlight the importance of reporting these situations to allow the definition of cut-offs to guide the best clinical management regarding treatment options.

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Uterine perforation during hysteroscopy and dilation and curettage and its management

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Uterine perforation is a potential, not rare complication of all intrauterine procedures and may be associated with injury of surrounding organs and structures. The aim of the study was to analyse the cause, diagnosis, treatment and preventive methods of uterine perforation resulting from hysteroscopic surgeries and dilation and curettege (D&C) procedure. The procedures were done according to different indications and purposes. Cases of uterine perforation were divided into two groups: caused by approaching (entry-related) and by surgical instruments (technique-related). Over a period of four years, 5861 consecutive patients underwent hysteroscopy and curettage in our hospital for various indications. Uterine perforation occurred in 24 cases (0.4%) of them. Among 3913 patients who underwent D&C, perforation occured in 15 cases (0,38% of all D&C and 0,25% of all procedures). Among 1948 patients who underwent hysteroscopy, perforation occured in 9 cases (0,46% of all hysteroscopy and 0,15% of all procedures). These 24 cases were all diagnosed during performing of the procedures. Among them 13 laparoscopy was performer to diagnose and treat and 10 cases were monitored by ultrasound examination and were managed by observation only. One of the patient underwent subsequent laparotomy. The most common site of perforation was the uterine fundus. More then 50 % of the uterine perforation cases were entry-related. Attention has to be paid to entry of Hegar. Almost 75% perforation were

related to surgeons' experience. Hysteroscopy is the current gold standard for evaluating intrauterine pathology, including submucous fibroids, polyps, hyperplasia. However, there are still problems and complications connected to hysteroscopy. Some risk factors that make access to the uterine cavity difficult may be prevented, however, others remain unpreventable. For patients in whom the perforation occurred during sondage, dilatation or insertion of blunt and cold instrument, without significant bleeding and who are hemodynamically stable, observation is recommended rather than immediate abdominal exploration.

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Vulvar lichen sclerosus - an underestimated disease. a review based on a retrospective analysis of 19 cases

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Introduction and objectives of the study: Lichen sclerosus (LS) is a benign, chronic, progressive dermatologic condition characterized by marked inflammation, epithelial thinning, and distinctive dermal changes accompanied by symptoms of pruritus and pain. Even though it is one of the most common dermatological conditions located in the genital area, in many cases it takes years before the patient is properly diagnosed. The aim of this study was to draw attention to the level of suffering of lichen patients and to remind physicians of this seemingly forgotten disease.

Methods: Every case of vulvar biopsy performed in the out-patient dysplasia consultation center at Kraków University Hospital from January 2022 to December 2022 has been analyzed in order to find all patients with histopathologically confirmed LS. A total number of 34 vulvar biopsies were performed. LS was diagnosed in 19 cases. The data analysis was conducted mainly with the use of descriptive statistics.

Results and/or discussion: The average age of LS patients was 60, with the youngest being 34 years old and the oldest 82 (median age 60). The most common symptoms were pruritus (55%) and burning sensation within vulva (23%). Some patients described general discomfort of genital and/or perianal region (14%), pain (5%) or even contact bleeding (5%). Almost half of the patients reported coexistence of vulval changes. Only 3 patients were referred for consultation with a genital lesion without accompanying symptoms. The majority of patients were not able to specify when the symptoms first appeared and what medication they had already been treated with. They reported couple of months up to 6 years and topical antifungal drugs and/or antibiotics were frequently mentioned. The most prominent vulvoscopic findings were localized within labia minora (29%) followed by labia majora (25%), posterior labial commissure (21%) and vaginal vestibule (8%). Pathological changes could also be found within anterior labial commissure, perineal raphe, between labia majora and minora, perianal. The most common comorbidities were hypothyroidism and Hashimoto's disease (7 cases), diabetes (4 cases), psoriasis and rheumatoid arthritis (1 case each).

Conclusions: Vulvar LS can result in physical dysfunction, disfigurement, and impaired quality of life. The diagnosis is based upon the presence of characteristic clinical manifestations, ideally with histologic confirmation. All women with vulvar LS, including those who are asymptomatic, should be treated in order to try to prevent progression of the disease.

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Change in the caesarean section rate before and during covid-19 pandemic among nulliparas in a perinatal center in Lithuania

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Introduction and aim: Robson classification system improves understanding of caesarean section (CS) rates and outcomes. Our aim was to compare the CS rate and indications for this operation before and during Covid-19 pandemic among nulliparas.

Methods: A retrospective analysis was conducted at the Department of Obstetrics and Gynaecology at the Lithuanian University of Health Sciences (LUHS). All women who were assigned to the 1st (Group 1) or the 2nd (Group 2) group according to the Robson classification system from the 1st of April to the 30th of September in 2019 and 2020 were included in the study. All indications for CSs were classified into 4 groups: 1) dystocia when the cervix is fully dilated (with/without oxytocin), 2) suspected fetal compromise (SFC), 3) dystocia when the cervix is not fully dilated (with/without oxytocin), 4) other pathology (*placenta previa* etc.).

Results: A total of 576 and 507 nulliparas gave birth in 2019 and 2020 respectively. The CS rate has increased from 16.0% (n = 92) to 17.6% (n = 89), p = 486. CS rate in Group 1 was 11.4% and 7.4% in 2019 and 2020 respectively, p = 0.096. CS rate in Group 2 was 22.6% and 29.1% in 2019 and 2020 respectively, p = 0.109. The main indication for CS in Group 1 was dystocia when the cervix is not fully dilated (with/without oxytocin) in 2019 (41.0%) and dystocia when the cervix was fully dilated (with/without oxytocin) in 2020 (45.5%), p = 0.270. The main indication for CS in Group 2 was other pathology in 2019 (34.0%) and dystocia when the cervix is not fully dilated (with/without oxytocin) in 2020 (30.6%), p = 0.353.

Conclusions: The CS rate among nulliparas didn't change at the LUHS during the Covid-19 pandemic. More operations because of dystocia when the cervix is fully dilated (with/without oxytocin) in Group 1 and because of dystocia when the cervix is not fully dilated (with/without oxytocin) in Group 2 were performed during the pandemic.

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Relieving outpatient hysteroscopy-associated pain: what is the most effective method?

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Introduction and objectives: Hysteroscopy is a reference diagnostic and therapeutic procedure in intrauterine pathologies, increasingly performed without general anesthesia. Pain is the most common reason for discontinuation or scope limitation of outpatient hysteroscopy (OH). There is no consensus on pain alleviation during OH. The aim was to compare the effectiveness of pain relief options during OH.

Methods: A prospective randomized trial (consent no.1072.6120.228.2021) included women subjected to OH due to focal uterine lesion, abnormal uterine bleeding, or infertility. Women were randomly assigned to 3 treatment arms – A: NSAID (ketoprofen 100

mg intravenously), B: A + infiltration anesthesia (20 ml of 1% lidocaine), C: A + paracervical block (20 ml of 1% lidocaine). Karl Storz 5.0 mm Bettocchi® operative sheath with 2.9 mm 30° telescope and 5Fr working channel was used. Intensity of pain in numeric rating scale (NRS 0-10), intensity of cervical bleeding (0-3), frequency of vaso-vagal reaction, and frequency of abandoning/ limiting the procedure were compared.

Results: The study included 201 women aged 18-80, 67 for each arm. NRS value during OH was higher in arm A than in B and C (6.3 vs. 5.1 vs. 5.0; one-way ANOVA $p = 0.01$). NRS value after OH in post-hoc tests did not differ and in all arms pain was imperceptible ($p = 0.007$). Higher NRS value compared to menstruation was demonstrated only in arm A ($p = 0.003$). Bleeding was more frequent in arm B than in A and C (76.1% vs. 33.4% vs. 35.9%; Chi-square test $p < 0.0001$), and its intensity did not differ from the other arms ($p = 0.3$). Vasovagal reaction was more common in arm B ($p = 0.048$). There was no difference between the arms in the rate of treatment discontinuation/ limitation ($p > 0.05$).

Conclusions: The paracervical block, although technically the most demanding, seems to bring the greatest benefits for the patient (general comfort) and the doctor (feasibility to perform).

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Endometrial receptivity and its relationship with clinical factors in patients with recurrent implantation failure

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Aim of the study: To evaluate endometrial receptivity in patients with recurrent implantation failure (RIF) and its relationship with clinical factors, such as patient's age, duration and cause of infertility and chronic endometritis.

Materials and methods: 117 women were included to the study: 68 women with RIF and 49 women undergoing IVF treatment because of idiopathic infertility or male factor (control group). Endometrial biopsy was taken from each patient. Samples were collected and sequenced with TAC-seq method targeting 67 biomarker genes for endometrial receptivity (beREADY assay), as well as examined with traditional immunohistochemistry for CD138, a marker of chronic endometritis. We assigned all patients according to result of beREADY test to 4 different groups: pre-receptive ($n = 16$), early-receptive ($n = 54$), receptive ($n = 44$) and late-receptive ($n = 3$).

Results: In RIF group pre-receptive endometrium was diagnosed significantly more often than in control group:13(19,1%) vs 3(6,1%,) patients; $p = 0,043$. There was no difference between the groups in the incidence of positive CD138 endometrial cells – 4(5,88%) vs 4 (8,16%); $p = 0,63$. Among 17 women with polycystic ovary syndrome (PCOS) pre-receptive and early-receptive endometrium was predominant - in 3(17,7%) and 12(70,6%) women, respectively; $p = 0,0447$. Similarly, among 18 patients with idiopathic infertility 12(66.7%) had early-receptive endometrium. There was significant relationship between displaced window of implantation and patients age and duration of infertility: from normal and late-receptivity in young women to early-receptive and pre-receptive endometrial status in older women with longer history of infertility.

Conclusions: Endometrial receptivity abnormalities are diagnosed more often in women with RIF than in other patients undergoing IVF treatment. The incidence of endometrial receptivity changes depends on patient's age and duration of infertility. Thus, older women with a long history of infertility might benefit the most from endometrial receptivity assessment. There is a need for further studies, aimed to personalize treatment of infertile couples, based on individual window of implantation.

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Induction of labour at mater dei hospital, Malta (re-audit)

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Introduction and Aims of the Study: Induction of labour (IOL) is the artificial initiation of labour. It is indicated when the benefits of delivering the fetoplacental unit outweigh the benefits of continuing the pregnancy.

The aim of the study is to assess the current IOL rates at Mater Dei Hospital and to explore its outcomes, comparing to data from 2015.

Methods: All cases of IOL between 1st May and 31st October 2021 were identified and analysed from the labour ward's monthly baby books.

Results and Discussion: Out of 2090 deliveries, 27.1% were induced (566 deliveries).

The average maternal age was 30.4 years (range 16 to 46 years old).

56.7% of mothers were nulliparous, 27.7% were primiparous and 15.6% were multiparous. Nulliparous mothers spent an average of 8 hours on labour ward, while primiparous and multiparous women spent an average of 5 hours.

6.4% were induced at less than 38 weeks of gestation, 40.4% between 38 and 39 + 6 weeks, 53.0% between 40 to 41 + 3 weeks and 0.2% beyond 41 + 3 weeks. Of those induced prior to 40 weeks gestation, 35.8% had no indication listed in the baby book. Diabetes (8.1%) and hypertension (7.8%) were the most common comorbidities in women who had IOL.

75.1% of mothers induced before 40 weeks gestation delivered via normal vaginal delivery. This decreased to 70.1% in those induced after 40 weeks. 20.7% of all women who had IOL had a tear or episiotomy.

79.3% of babies born by IOL had an APGAR score of 9 or more at 1 minute. 1.4% of babies born by IOL required neonatal intensive care. The average birthweight was 3.295kg.

Conclusions: Our study shows a persistently high rate of IOL at our centre, with no recorded indication in 16.8% of cases.

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Attitudes and knowledge about labour pain management methods among polish women

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Introduction: The Organizational Standard of Perinatal Care in Poland requires that women in childbirth are offered both pharmacological and non-pharmacological options for pain relief.

Aim: The aim of this study was to assess knowledge, attitudes, and satisfaction levels regarding pharmacological and non-pharmacological methods for relieving labour pain among Polish women.

Methods: We undertook a cross-sectional study of Polish women who gave birth naturally between 2015 and 2018. Our proprietary survey was distributed online in October 2018.

Results: 12,226 correctly completed questionnaires were received. 75% of respondents indicated the Internet as a source of knowledge about methods of relieving labour pain. 68% of them did not gain any information on LPM from doctors during their prenatal appointments . When choosing their preferred method, respondents were guided by the new-born's safety (46%), the midwife's advice (40%), and the chance of immediate pain relief (22%). 52% of participants reported willingness to use pharmacological methods for relieving labour pain, and 49% of them used them. Inability to use pharmacological techniques was due to the unavailability of an anaesthesiologist in the birthing room (41%) or too advanced stage of labour (43%). 48% of respondents did not decide to use pharmacological methods, because pain was bearable (29%), anxiety of child's health (17%), or belief that the pain is natural and it should not be avoided (16%).

Discussion: Ensuring access to, and adequacy of, a variety of labour pain management methods is important. In Poland, non-pharmacological methods are used more often than the less-accessible pharmacological methods. In many instances, the unavailability of anaesthetists, denies women their first choice of pharmacological methods.

Conclusion: Priority should be given to increasing the availability of both pharmacological and non-pharmacological methods for relieving labour pain in Poland. The knowledge about the methods of LPM is not satisfactory. We should focus on well- maintained education guided by doctors, midwives and media.

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Breast cancer prevention during pregnancy in poland- the effectiveness of screening program- preliminary data

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Introduction, objectives: Pregnancy-associated breast cancer (PABC) is defined as breast cancer diagnosed during pregnancy or in the first postpartum year. According to the fact, that PABC affects approximately 1 in 3000 pregnancies and 70% of cases are diagnosed at advanced stage, it is essential to develop an effective screening program for pregnant women.

The aim of the study was to assess the level of BC prevention during pregnancy in Poland.

Methods: The study was conducted online by sharing the Google survey on the social networks among Polish women. Study group consisted of 100 women aged 24 to 52 years old who gave birth at least once in their life. The survey includes 44 questions concerning demographic data, individual risk factors, information about pregnancies and BC prevention according to Polish societies' recommendations.

Results: In the study group, the mean age during the first pregnancy was 26.6 ± 4 years. Up to 84(84%) of women have self-examined their breasts in life and 47(47%) of them think, they can perform self-examination properly. In 73(73%) cases, their doctors had never performed a breast examination during pregnancy. Only 7(7%) women were examined between 33 and 37 weeks of pregnancy. Nineteen (19%) women had breast ultrasound during pregnancy and most of them were examined once. Fifteen (15%) women were at least 35 years old during pregnancy, only 5(33,3%) of them had breast ultrasound during pregnancy. In those cases, benign pathologies were diagnosed.

Conclusion: Breast cancer prevention during pregnancy is unsatisfying in Poland. We should focus on well-maintained women's education but also emphasize the need for prophylactic breast examination in accordance with the recommendations.

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Liver damage profile including bile acids serum levels as a predictor of disease progression and poor obstetrics outcomes in covid-19 pregnant patients

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Introduction: SARS-CoV-2 unsparingly impacts all areas of medicine. Pregnant women are particularly affected by the pandemic and COVID-19 related liver damage seems to be another threat to maternal and fetal health. The aim of this study was to define liver damage profile including bile acids serum levels in COVID-19 pregnant patients and to determine predictors of disease aggravation and poor obstetrics outcomes.

Methods: This study was carried out in the Department of Obstetrics and Gynecology, at the Central Clinical Hospital of the Ministry of the Interior and Administration in Warsaw, Poland between 01.02.2021 and 01.11.2022. The study group consists of148 COVID-19 pregnant patients and 102 SARS-CoV-2 negative pregnant controls.

Results: COVID-19 pregnant patients in comparison with SARS-CoV-2 negative counterparts presented at admission higher levels of liver injury markers with exception of ALP. In the study group fifty-four pregnant patients presented liver involvement at admission (41,9%). Hepatotoxic damage accounted for 27 (19.85%),cholestatic type were diagnosed in 11 (8.09%) and mixed type of liver injury was presented in 19 (13.97%) of patients. Higher serum levels of AST, ALT, GGT, total bilirubin and bile acids as well as mixed type of liver injury at admission were correlated with severe form of an illness. Univariate and multivari-

ate logistic regression revealed that AST > URL, ALT > URL and hepatotoxic type of liver damage predisposed COVID-19 pregnant patients to poor obstetrics outcomes.

Conclusion: Hepatic damage in pregnant women with COVID-19 is a common, mild, transaminase-dominant or mixed type of injury, and often correlates with elevated inflammatory markers. SARS-CoV-2 test should be performed as a part of differential diagnosis in elevated LFT's. Although bile acid serum levels were commonly elevated they seems to be clinically irrelevant in terms of pregnancy outcomes. At initial presentation SARS-CoV-2 infected pregnant women with mixed type of liver injury were more prone to disease progression toward greater clinical severity. Cytotoxic type of hepatic disfunction however predisposed to poor obstetric outcomes.

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Endometrial cancer as an underlying cause of infertility: case series

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Introduction and objectives: Due to delayed reproduction, endometrial cancer (EC) is increasingly diagnosed during infertility diagnostics. Standard treatment is not accepted by women wishing to preserve the uterus. Fertility-sparing treatment is possible in type I EC, FIGO IA without myometrial invasion, but factors affecting the outcome have not been identified. The aim was to evaluate the effectiveness of oncofertility management.

Methods: A retrospective cohort study was conducted among women with uterine corpus malignancy aged up to 40 years.

Results: Among 22 women diagnosed with uterine malignancy in the years 2018-2022, 15 were diagnosed with type I EC, FIGO IA. In 9 of these women, EC was detected upon infertility diagnostics and only 2 of them demonstrated abnormal uterine bleeding. 7 out of 9 women were diagnosed by hysteroscopic endometrial biopsy and 2 by uterine curettage. Medroxyprogesterone acetate (oral and/or depot) and levonorgestrel-releasing intrauterine system were used as oncofertility treatment. Control endometrial biopsies were performed at 3-6 months intervals. All women were offered in vitro fertilization (IVF). The remaining 6 women, referred for hysterectomy, declared completion of reproduction or no desire of childbearing. The mean age in the oncofertility group was 33 and in the non-oncofertility group 36. Out of 9 women, 2 achieved live births (1 natural conception, 1 IVF), 2 are being treated for "thin endometrium" prior to thawed embryo transfer, 2 are awaiting biopsy results, 2 underwent hysterectomy due to EC progression and 1 due to ineffective infertility treatment. Due to the small sample size, the influence of variables (age, BMI, age at menarche, diabetes, polycystic ovary syndrome, parity, duration of infertility) on the course of treatment was not assessed.

Conclusions: Oncofertility is a non-optimal management of EC underlying infertility, which in some women enables childbirth. Advances in molecular genetics give hope for better selection of patients.

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Audit on Management of Reduced Fetal Movements, Mater Dei Hospital (Malta)

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Objective: The aim is to note the current practice in Malta regarding management of Reduced Fetal Movement (RFM) and comparing it to 'Saving Babies' Lives' care bundle of the UK and to the RCOG Green-top guideline Number 57. This will produce proposals for better effective management of RFM in Malta and raise more awareness of RFM.

Design: The project is a retrospective descriptive study, aimed to collect data on the current local practice.

Method: Project was done retrospectively by reviewing the notes of women who delivered at Mater Dei Hospital (MDH) over a 3-month period. This was achieved by noting those who had RFM during gestation and gathering data regarding gestation age at presentation, any recurrent episodes, if cardiotogography (CTG) and ultrasound were done, whether they were admitted and if they were offered delivery and the outcome.

Results: Data on 627 women was collected; 58 had experienced RFM. 52 of them experienced one episode of RFM, 5 experienced two episodes, while 1 experienced four episodes. The majority of episodes were experienced between 28-39 weeks of gestation. The hand-held Doppler/Pinnard were not used to confirm fetal viability in any instance. CTG was used instead, albeit not done or documented in 5 patients.

Where CTG was done, computerised CTG was not used. There were no documentation showing that the growth chart was reviewed, and no documentation about symphysiofundal height (SFH) being done in the previous two weeks as per guideline. SFH was performed on only 2 patients. Induction of labour was discussed with 50% of women with one episode of RFM at or after 39 weeks.

Conclusions: One in ten (10%) of women delivering in MDH experienced some perception of RFM. Lack of documentation was noted in patient's notes. Recommendations include formulation of a patient information leaflet about RFM to be distributed by 28 weeks of gestation and emphasis placed on importance of ultrasound growth, liquor and umbilical artery doppler in recurrent RFM > 28 weeks.

The importance of discussing induction at or > 39 weeks with 1 or more episodes of RFM was discussed and the significance of computerized CTG use highlighted. The formulation of a checklist to be used for better documentation was initiated. Repeat audit with higher recruited numbers and a longer study period was advised to increase power and limit statistical errors and suggestions for re-audit after 6-12 months to close the audit cycle submitted.

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Challenges and further perspectives of laparoscopic hysterectomy

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Introduction: Laparoscopic hysterectomy brought from the first works of prof. Reich really a real revolution. It is even more obvious that the fact that prior to that, operating techniques had changed very little over several centuries, was mentioned. The laparoscopic approach introduced a completely different approach into everyday gynecological surgical practice. Since 1989, when prof. Raich performed the first laparoscopic hysterectomy, we can rightly speak of the true beginnings of modern minimally invasive gynecological surgery.

Discussion: Over the three decades since laparoscopic hysterectomy was introduced into routine practice, a number of innovations and improvements to the original technique have been introduced. Great progress has been made with the development of video laparoscopy. Progress has also been achieved by improving digital technology. In addition to the aforementioned, a very big step forward was made in terms of improving the instrumentation for performing laparoscopic hysterectomies. At the same time, modern uterus manipulators and other laparoscopic instruments were perfected. Significant positive steps are also associated with the development of electrocoagulation devices. At the same time, the application of the ultrasonic knife, as well as numerous other modern instruments, is of exceptional importance.

Conclusion: The Croatian Society for Gynecological Endoscopy of the Croatian Medical Association has been operating since 2000 in Zabok. During that time, about a thousand gynecological endoscopists from the Republic of Croatia and Southeast Europe were educated through twenty-three international endoscopy postgraduate courses “Kurt Semm”. From the first laparoscopic hysterectomy performed at Zabok General Hospital by a team of gynecological endoscopists led by prof. With Kopjar, today we have already performed over a thousand laparoscopic hysterectomies. We can proudly say that today in the Republic of Croatia, the application of laparoscopic hysterectomy has entered into routine practice in almost all Croatian hospitals. We hope that very soon robotic surgery will also enter the territory of the Republic of Croatia. We also expect that in the future, a large proportion of laparoscopic hysterectomies will also be performed robotically in our areas.

Keywords: laparoscopic hysterectomy, robotic surgery

Literature: Reich H. Total laparoscopic hysterectomy: indications, techniques and outcomes. Curr Opin Obstet Gynecol. 2007;19(4):337-44.

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Emergency cervical cerclage performed at 25 weeks with favorable materno-fetal outcomes: a case report

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Preterm birth, whether it is due to preterm uterine contractions or cervical insufficiency, is the major cause of neonatal mortality and morbidity worldwide and it may come with lifelong consequences for the survivors and their families. Emergency cervical cerclage was found to be effective in prolongation of pregnancy in women with asymptomatic cervical dilatation and protrusion of the fetal membranes.

A 38-year-old primigravida with cervical insufficiency diagnosed at 25 weeks of gestation presented to the obstetrics department with bulging fetal membranes. She was administered a course of antenatal steroid treatment and an antibiotic regimen consisting of Metronidazole, Ceftriaxone, and Clarithromycin. Emergency cervical cerclage with double-level stitches was performed. For retraction of membranes into the uterine cavity amnioreduction was performed during the procedure. The patients was administered indomethacin perioperatively and progesterone vaginally until 36 weeks of gestation. The amniotic fluid collected during cerclage was positive for Ureaplasma species. In the following days, the well-being of the patient and the fetus was ensured by the means of monitoring the markers of inflammation, cardiotocography tracings, and USG examinations.

At 36 weeks of gestation, the patient presented to the emergency department with uterine contractions. Due to tokophobia, she was qualified for cesarean section, and a premature female fetus of 2800g was delivered in good general condition.

This case demonstrates that an emergency double-level cervical cerclage combined with antibiotics can be an effective method treatment in women with cervical insufficiency.

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Fertility-sparing treatment in endometrial cancer: a review with future directions

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In modern societies numerous changes of life-style contribute to increasing incidence of endometrial cancer (EC) in patients under the age of 45 years with unfinished childbearing plans, which is a driving factor of innovation in gynecological treatment.

As fertility-sparing is not a standard of care for EC and the recommendations indistinctly suggest the possibility of choice between three continuous progestin-based therapies, an overview of fertility-sparing treatments was required.

Upon the complex and heterogeneous subject of fertility-sparing treatment in EC, a narrative review, based on PubMed search, clinical trials and guidelines, was conducted to illustrate the advancements of this field and highlight its future directions. The majority of researchers do not distinctly analyze only EC cases, but combine the group with endometrial hyperplasia (EH) cases.

Levonorgestrel-releasing intrauterine device (IUD-LNG) was the most frequently analyzed non-invasive method of EC fertility-sparing treatment, an alternative to traditional surgical management of hysterectomy and bilateral salpingo-oophorectomy with or without lymphadenectomy.

Upon the histopathological diagnosis of endometrioid endometrial cancer, mainly without myometrial invasion, patients were qualified for conservative IUD-LNG treatment with follow up after 3 months, 6 months and, conditionally, 9 months of treatment depending on study protocols.

The rate of complete response varied between different studies from 37% to 88%, mainly due to heterogeneity of patient qualification criteria.

Additionally, only few studies investigated treatment with oral progesterone and metformin, often in correlation with IUD-LNG treatment.

In the future, tailoring therapies with molecular mutation testing and routine genetic diagnosis of hereditary syndromes may offer a reduction in overtreatment and undertreatment of patients, leading to improved patient survival rates and enhanced quality of life.

Further multicenter prospective studies are required to investigate and review the use of IUD-LNG in EC treatment with standardized patient qualification criteria.

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The human microbiome in pregnancy, childbirth and in the newborn: A prospective, longitudinal pilot study

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Introduction and aims of the study: Changes in the composition of the vaginal microbiome are a possible cause of preterm premature rupture of membranes (pPROM) and preterm birth. To adequately understand these changes, it is necessary to understand the healthy microbiome during pregnancy and the early infant microbiome. This study aimed to explore the composition and function of the maternal microbiome during pregnancy and the subsequent development of the neonatal microbiome.

Methods: This prospective, longitudinal study was conducted at the Medical University of Vienna between August 2020 and September 2021. A total of 37 pregnant women with an unremarkable course of pregnancy and a planned caesarean section, and subsequently their newborns, were included in this study. Microbiome swabs were taken from the mothers at inclusion (vaginal, rectal) and at c-section (vaginal, rectal, placental and intracavitary). Neonatal swabs at birth and on the 2nd/3rd day of life (buccal, dermal and stool). The microbiome samples were analyzed by the Viennese Joint Microbiome Facility using 16S rRNA gene amplicon sequencing.

Results: A total of 30 pregnant women terminated the study. In 7 out of these 30 mothers all maternal and neonatal swabs contained enough biomass for conclusive microbiome analysis (yield > 500). No change in the maternal vaginal and rectal microbiome was observed between inclusion and delivery. The neonatal microbiome samples as well as placental and intracavitary samples were consistently sterile at birth/c-section. Interestingly, the assembling neonatal microbiome on the 2nd/3rd day of life was found to be distinctly different from the maternal microbiome but similar to each other's. All neonates were admitted at the same neonatal ward after birth.

Conclusion: In conclusion, the development of the neonatal microbiome is initiated at birth and seems to be driven rather by environmental factors than genetic/maternal components. In healthy pregnancies the maternal microbiome remains unchanged during the course of pregnancy. Based on the findings of this study, the changes of the maternal and neonatal during pPROM and preterm birth should be explored.

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Osteopathic approach as an additional therapy of infertility in women with PCOS

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Introduction and aim of the study: The novel potential therapeutic strategies are needed for infertile and pregnant polycystic ovarysyndrome (PCOS) women. Due to therapeutic doubts, more anti-inflammation approaches in PCOS treatment, especially during the COVID pandemic, are considered. Low-grade inflammation is a recognized factor causing metabolic disorders in PCOS and a core feature of COVID-19 pathobiology. The osteopathic manipulative treatment (OMT) activates the cholinergic anti-inflammatory pathway (CAP) and can inhibit proinflammatory cytokines, such as TNF, IL-1β, and TNF-α. In our paper we analyzed the influence of OMT in women with PCOS.

Methods: Seventy-three patients, aged 29–46, with a history of reproductive failure who underwent a physiotherapeutic treatment, were evaluated. Six months after the end of a physiotherapy session, a follow-up questionnaire was performed.

Results: The results show that the majority of women (83.6%) were satisfied with the therapeutic process and that the sessions met the patient's expectations. Reducing the level of anxiety related to infertility treatment and pregnancy was declared by n = 60 (82.2%) women, an improvement in well-being was declared by n = 72 (97.3%), and increasing awareness of the body after physiotherapy sessions was declared by n = 70 (95.9%) women. A statistically significant improvement in well-being was also observed in women who had a greater number (10–30) of therapeutic sessions (p = 0.04).

Conclusions: The physiotherapeutic sessions enhanced quality of life and had a positive effect on overall health.

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Hysteroscopic metroplasty using a dual-wavelength diode laser system: A single center experience

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Objectives: The aim of our study was to assess the feasibility, safety and efficacy of office hysteroscopic metroplasty using a dual-wavelength (980 nm and 1470 nm) diode laser system and to evaluate reproductive outcomes.

Material and methods: 30 patients were treated for septate uterus between 2016 and 2022 in our Department. The indications for hysteroscopic metroplasty were recurrent abortion and infertility. We used a 4 mm-office hysteroscope with a diode laser fiber. After exploration, the septum was divided with use of the laser fiber.

Results: Operating time of the procedure was 14 ± 1,08 min. Intraoperative pain was 3,01 ± 0,52. There were no intraoperative complications. The hysteroscopic second-look after two months showed in all patients complete removal of the septum and no intrauterine synechiae. We analyzed pregnancy outcomes (follow-up post-surgery for 6–24 months).

We had 15 pregnancy reported: 9 reached term, 5 were ongoing at the time of analysis and 2 resulted in first-trimester miscarriage.

Conclusion: Hysteroscopic metroplasty using a dual-wavelength (980 nm and 1470 nm) diode laser system could be a feasible and safe alternative to the scissor, bipolar twizzle and bipolar or monopolar resectoscope techniques. We believe that vaporization of the septum with a diode laser could reduce the formation of adhesions and consequently reduce the occurrence of septum persistence.

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Obstetric outcomes of deliveries after two or more cesarean sections

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Introduction and aim: Some patients awaiting delivery after two or more cesarean sections are highly motivated and opt for vaginal delivery. Trial of labour after one cesarean sections is considered reasonably safe, but sometimes patients after two or more cesarean sections undertake a trial of labour despite the risk. This study aimed to compare TOLAC after two cesarean sections to TOLAC after three or four cesarean sections.

Methods: It was a retrospective cross-sectional study of 372 deliveries after two or more cesarean sections in Saint Sophia Hospital in Warsaw in the years 2015-2022. There were 326 deliveries after two, 35 after three, and 11 after four cesarean sections. Outcomes of interest were death, uterine rupture, failed trial of labour, hemorrhage, hysterectomy, surgical complications, need of transfusion, need of additional hemostatic procedures, retained placenta, perineal tears, wound complications, operative vaginal delivery, cesarean section scar dehiscence, lack of progress in labour, and threatening birth asphyxia. All of the above were combined into the composite outcome. Risk of complications in TOLAC after two cesarean sections was used as a reference.

Results: We have observed an increased risk of emergency cesarean section and composite maternal outcome after three and four cesarean sections. We have also detected the high rate of resignation from TOLAC during labour, which almost achieved statistical significance.

Conclusions: TOLAC after three or four cesarean sections should not be recommended, and those highly motivated individuals who want to proceed with TOLAC should be informed about the risk of such.

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Women's suggestions on how to improve the quality of breastfeeding and support at the hospital: a qualitative study in Latvia using the WHO standards as framework for the analysis

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Breastfeeding is widely recognized as the optimal form of nutrition for newborns,has many benefits for the mother,including the release of hormones that promote bonding and may reduce the risk of certain diseases.Despite these benefits,breastfeeding rates vary widely around the world and are influenced by a variety factors and support being received from the hospital.This study aimed to explore suggestions from Latvian women who recently delivered in a hospital on how to improve the breastfeeding support based on WHO Quality of maternal and newborn care (QMNC) questionnaire.

Methods: Between March 1,2020 to October 28,2021 a questionnaire with open-ended questions was administered to mothers who gave birth at healthcare facilities,in order to gather suggestions for improving the quality of maternal and newborn care. Responses were analysed using thematic analysis,with the WHO Standards for improving the QMNC serving as a framework for the analysis.The responses were grouped into 16 key recommendations. This study processed data on breastfeeding recommendations.

Results: 597 mothers provided a total of 530 comments and 663 suggestions on how to improve the QMNC. 72 (10,9%)of them made suggestions about breastfeeding. 30 (28.8%) women suggested to "provide full-time breastfeeding consultant in the hospital",16(15.4%) stated that "doctors and midwives should improve their breastfeeding knowledge", 9 (8.7%)"did not receive sufficient information on the benefits of exclusive feeding ",28 (26.9%)"wants more support and encouragement", 7 (6.7%)"to obligatory receive breastfeeding counseling for each mother",10(9.6%) mentioned that regular feedback about "effectiveness of breastfeeding"might be supportive.Four women expressed opinion to provide with nursing chair and do not judge the mother for her feeding choices.

Conclusions: Gathering feedback from women on ways to enhance QMNC after giving birth in the hospital revealed important suggestions for areas of care that should be improved according to patients perspectives.Education of medical staff and continous support in evidence based breastfeeding principles should be included in the hospital policies.

Keywords: Hospital, Newborn, Qualitative study, Quality of care, WHO, Birth experience.

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Efficacy of sacral neuromodulation in the treatment of refractory overactive bladder and non-obstructive urinary retention –A preliminary report

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Introduction: Sacral neuromodulation (SNM) is a minimally invasive treatment approved for refractory OAB and non-obstructive urinary retention. The procedure has been performed in our Clinic since 2020. The report is aimed to share our experience in the field.

Materials and methods: All (18) medical history records of patients who underwent SNM have been analyzed to evaluate the neuromodulation efficacy in symptom reduction (based on the OABSS), the adjusted amplitude settings applied, and concomitant complications. 18 patients with a mean age of 52 (25-82) were included in the study. 15 of them suffered from OAB resistant to pharmacological treatment, out of whom 6 had prior intravesical onabotulinumtoxinA treatment as well. 3 patients were qualified for SNM due to non-obstructive urinary retention.

Results: Six months after the implantation of the internal pulse generator (IPG) 16 out of 18 patients (89%) were satisfied with the treatment. The mean percentage of symptom reduction in the group of patients with refractory OAB was 61 %. All the patients suffering from non-obstructive retention responded positively to SNM. The mean adjusted device amplitude setting was 1.5V (0.6-3.6V). One patient did not experience any improvement after the test stimulation and the device was removed, while the other one had the definitive device removed due to surgical site infection after an initially positive response. In the extended follow-up, 2 more patients underwent removal of the definitive device - as a result of a recurrent device rejection with SSI and post-injury device failure respectively. Up to date 14 out of 18 patients (78%) continue the therapy.

Conclusions: Despite the small sample size, this study indicates that SNM provides sustained clinical benefit for patients suffering from both refractory OAB and non-obstructive urinary retention.

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Haemophilus influenzae infection in pregnancy and its adverse fetal outcomes related, about a case

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Introduction and aims of the study: *Haemophilus influenzae* (*Hi*) is a pleomorphic gram-negative rod that commonly colonizes and infects human respiratory tract. It can be divided in typeable and nontypeable strains. Among typeable strains, H. influenzae serotype b (Hib) is the most virulent. In areas such as our country, Hib vaccination has been included in the recommended immunization schedule, so its prevalence as declined favoring nontypeable *Hi* (usually less virulent).

The authors aim to report a case of stillbirth associated with maternal nontypeable *Hi* infection.

Methods: Single case retrospective study

Results: A 25-year-old pregnant woman, otherwise healthy, with an uneventful pregnancy, was admitted to the emergency department at 22 weeks and 5 days with fever (39°C) and severe pelvic pain. In the previous 5 days she had cough and rhinorrhea.

Physical examination revealed cervix dilatation (4 cm). Later in that day, she expelled a stillbirth with 440g. Fetal and placental anatomopathological and microbiologic examination were included in etiologic study.

Because of persistent fever, antibiotics were started, after blood cultures were collected. Although chorioamnionitis seemed the most probable scenario, revaluation with multidisciplinary approach with Internal Medicine was undertaken. A pneumonia was diagnosed. Microbiologic assessment of fetus, placenta and blood cultures identified a nontypeable *Hi*. Adherence to immunization schedule was confirmed.

She was discharged home with reassessment in our outpatient clinic.

Conclusions: Data about this infection in pregnancy are scarce and mostly based on case reports/small case series. Pregnancy associated with invasive *Hi* infection has greater risk, and often resulting in fetal death or premature birth with infant serious illness. Since infection can be related to both strains, Hib immunization only offers partial protection. Fever is an important signal, and its persistence should lead to comprehensive investigation.

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Impact of COVID-19 pandemic on obstetrical and gynecologic services in a Greek secondary hospital

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Introduction and aims of the study: The pandemic due to SARS-CoV-2 as well as the implement of severe restriction measures, have brought radical changes on individual and community level. During the first lockdown in Greece, national healthcare system reduced scheduled healthcare activities in order to reduce the risk of viral transmission. It is assumed that the pandemic may have an impact on global population, not only due to the increased mortality but also through a reduction in births. The aim of this study was to evaluate the effect of COVID-19 pandemic both in the number of births and gynecological surgeries in a Greek secondary hospital.

Materials and methods: We retrospectively reviewed the patients operated in the gynecological department of a secondary hospital during Greece's first lockdown (between 13 March 2020 and 30 May 2020) and we compared the results with the patients of the corresponding time period in 2019. Following a comparison of the number of gynecological

operations with time intervals of the previous year (2019) and two years after the pandemic's start (2022). At the same time, a second retrospective study was conducted between November 2020 and March 2022 (~280 days from the start date of the first lockdown in Greece), using the records of our maternity ward. We compared the number of births taking place during the aforementioned period with the respective months in the previous years.

Results: Between March 13, 2020 and May 30, 2020, 16 gynecological surgeries were recorded, compared to 68 during the same period in 2019. The number of procedures was reduced by 76.47%. In contrast, 69 surgeries were carried out during the corresponding period, two years after the first lockdown, representing a 331.25% increase; i.e., the number of gynecological procedures has recovered to levels comparable to the year before the pandemic began. Furthermore, as for the obstetric services, 570 births were recorded between November 1, 2020 and March 31, 2022, compared to 607 between June 1, 2019 and October 31, 2020. There was a 6.1% decrease in births.

Conclusions: The results of our study indicate a marked decrease in gynecological procedures during the first lockdown and a declining trend in birth rates during the COVID-19 pandemic. We acknowledge that our data may have various limitations and may by some means be altered by local factors. Nonetheless, as with previous epidemics, recovery of birth rates to pre-pandemic patterns is expected.

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Severe maternal morbidity – The importance of obstetric surveillance systems

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Severe acute maternal morbidity SAMM is characterised by a condition of the woman during pregnancy, labour or within 42 days after the termination of the pregnancy, when she sustained critical, life-threatening complications but survived. The criteria of SAMM differ, usually there are obstetric emergencies or their combinations postpartum haemorrhage, eclampsia, HELLP syndrome, cardiac arrest, sepsis or amniotic fluid embolism. Most of them are rare situations. The Methodology of data acquisition is crucial to get the most relevant information. The retrospective studies of these cases may be complicated by insufficient documentation, routine data about births or hospitalizations may be underestimated false-negative cases or overestimated false-positive cases. The active prospective surveillance with an element of case Validation to exclude other diagnoses is crucial to get the most exact incidence, relevant data for further analyses of risk factors, diagnoses, treatment, outcome of women, new-borns. The uniform definitions of separate causes of SAMM, dataset are very important, especially to make it possible for international comparison, but also as there are rare cases to perform a multi-country study to obtain sufficient numbers, get relevant outcomes in a shorter period of time. These types of obstetric surveillance systems exist, are increasing in many countries worldwide. A multi-country collaboration: INOSS The International Network of Obstetric Survey Systems was developed to facilitate studies of severe, uncommon obstetric complications in pregnancy, childbirth. INOSS is active in this multi-country collaboration, working on uniformity of the definitions, datasets, provide a lot of studies focusing on severe obstetric morbidity. Obstetric surveillance, pro-active, prospective, on regional as well as multi-national bases is seemingly the most effective way to obtain relevant data for research, further analyses, further more implementation into current clinical practice.

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Late complication of morcellation after lash procedure – A case report of benign metastasizing leiomyomas

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Severe acute maternal morbidity SAMM is characterised by a condition of the woman during pregnancy, labour or within 42 days after the termination of the pregnancy, when she sustained critical, life-threatening complications but survived. The criteria of SAMM differ, usually there are obstetric emergencies or their combinations postpartum haemorrhage, eclampsia, HELLP syndrome, cardiac arrest, sepsis or amniotic fluid embolism. Most of them are rare situations. The Methodology of data acquisition is crucial to get the most relevant information. The retrospective studies of these cases may be complicated by insufficient documentation, routine data about births or hospitalizations may be underestimated false-negative cases or overestimated false-positive cases. The active prospective surveillance with an element of case Validation to exclude other diagnoses is crucial to get the most exact incidence, relevant data for further analyses of risk factors, diagnoses, treatment, outcome of women, new-borns. The uniform definitions of separate causes of SAMM, dataset are very important, especially to make it possible for international comparison, but also as there are rare cases to perform a multi-country study to obtain sufficient numbers, get relevant outcomes in a shorter period of time. These types of obstetric surveillance systems exist, are increasing in many countries worldwide. A multi-country collaboration: INOSS The International Network of Obstetric Survey Systems was developed to facilitate studies of severe, uncommon obstetric complications in pregnancy, childbirth. INOSS is active in this multi-country collaboration, working on uniformity of the definitions, datasets, provide a lot of studies focusing on severe obstetric morbidity. Obstetric surveillance, pro-active, prospective, on regional as well as multi-national bases is seemingly the most effective way to obtain relevant data for research, further analyses, further more implementation into current clinical practice.

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Late complication of morcellation after lash procedure – A case report of benign metastasizing leiomyomas

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Benign metastasizing leiomyoma (BML) is a condition, where the smooth muscle proliferation extrauterine is recognized. BML affects female patient who were historically affected by leiomyoma uterine. In literature, there are reports of leiomyomas metastasize mostly in the lungs, but also in several organs such as heart, lymph node, abdominal cavity. It's a rare condition and the etiology is unexplained. Hysterectomy, myomectomy and procedures where morcellators are used may have etiological implications.

The aim of the study is to present the risks resulting from morcellation. Presentation of a case of multiple pelvic leiomyoma tumors in a patient, who had previously undergone surgery for myomatous uterus – diagnostic difficulties due to the different location of lesions and the resulting symptoms.

Herein we report a rare case of multiple benign metastasizing leiomyoma. A 47-year-old woman was admitted to the hospital with abnormal tumors of abdominopelvic cavity. The patient had previously undergone laparoscopic supracervical hysterectomy for uterine leiomyoma. Computed tomography showed three well-circumscribed pelvic tumors. Laparotomy was performed. After pathological assessment, patient was diagnosed with bening metastasing leiomyomas.

Benign metastasizing leiomyoma is a rare condition that affects woman with a history of hysterectomy or myomectomy. Total laparoscopic hysterectomy could be preferred over laparoscopic supracervical hysterectomy to avoid morcellation. Mostly because there is a risk of tissue scattering, which can lead to occurrence of benign metastasizing leiomyoma.

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Ovarian masses in children and adolescents

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Introduction: Abdominal masses in the pediatric population most commonly derive from the ovaries. Ovarian masses are divided into non-neoplastic lesions (functional cysts, abscesses, ovarian torsion and endometriosis) and neoplastic tumors (epithelial, sex cord-stromal, germ cell and miscellaneous).

Aims: Review of the literature on ovarian masses in children and adolescents

Methods: Search in MEDLINE about ovarian masses in children and adolescents

Results: Ovarian neoplasms are rare in children and adolescents with an annual incidence of 2.6/100,000 girls. Germ cell tumors are the most common ovarian neoplasms in the pediatric population with mature cystic teratoma representing the predominant histological type, in contrast to adults, who most frequently present with epithelial tumors. Additionally, functional cysts commonly develop in all pediatric age groups due to different hormonal insults. Although the majority of ovarian masses in childhood and adolescence are benign, the possibility of malignancy exists. Clinical manifestations include abdominal pain, palpable mass, abdominal distention, nausea/vomiting and endocrine abnormalities, while some asymptomatic cases are detected incidentally. The malignancy risk can be evaluated based on clinical presentation, imaging findings and tumor markers. Solid or heterogenous lesions, large size, calcifications and bilateralism are considered indicators of malignancy. Elevated serum tumor markers, including α-fetoprotein, β-human chorionic gonadotropin, lactate dehydrogenase, inhibin, cancer antigen 125 and human epididymis protein 4, raise concern for ovarian cancer. However, they can also be observed in benign lesions and their absence does not exclude malignancy. Pediatric ovarian masses should be treated in specialized centers to avoid unneeded oophorectomies since ovarian conservation is of particular significance in children and adolescents.

Conclusions: The management of ovarian masses in children and adolescents should be curative and, when feasible, function-preserving and minimally invasive. Imaging and tumor markers help in differentiating benign from malignant lesions and, thus, in determining the optimal treatment approach.

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Changes in peripartum care and outcome in Estonia 1992–2021: Comparison of two periods based on data from Estonian medical birth registry

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Aim: Our study aimed to analyse trends in peripartum care and outcomes in Estonia over the period from 1992 to 2021.

Methods: Data was obtained from the Estonian Medical Birth Registry, and two 15-year periods (1992–2006 and 2007–2021) were compared. Absolute numbers means or proportions with 95% CI were calculated.

Results: The total number of delivery units decreased and the number of births increased in tertiary care units. The proportion of deliveries outside the hospital was marginal. The proportion of IVF and multiple births increased, the proportion of preterm births remained at the same level (5%). Most of very preterm deliveries take place in referral hospitals with NICU. There were more interventions in the period 2007 to 2021 – inductions of labour and vacuum deliveries doubled. The use of epidural analgesia tripled in the second period. The proportion of caesarean sections (CS) has risen from 6.8% in 1992 to 19.9% in 2021. However, the proportion of CS has remained stable (around 20%) since 2007. The proportion of PPH increased six times in the second period. Gestational diabetes was diagnosed significantly more often (0.2% versus 6% in the last period), but there was less preeclampsia cases. Perinatal mortality decreased remarkably from 20.1 in 1992 to 3.7 per 1000 births in 2021.

Conclusion: The antenatal and peripartum care and outcome for mothers and babies have improved significantly over the last 30 years. Guaranteed health insurance for all pregnant women in Estonia, national evidence-based guidelines and standards of care, improved training of specialists have all played a role. The digitalised medical birth registry helps to monitor the quality of care and perinatal outcome.

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Labour induction treatment guidelines across Europe: A review

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Introduction and aims: European labour induction standards are poorly understood. We therefore reviewed the most recent induction of labour (IOL) guidelines in several European countries to assess their recommendations on pharmacological first-line interventions.

Method: Nine countries were included in this study: UK, France, Germany, Italy, Spain, Denmark, Finland, Norway and Sweden. The Embase and Medline databases were searched via the Ovid platform using search terms for 'induction of labo(u)r' and study design filters for 'guideline (s)'. Searches were conducted in English, from inception to November 2022. Literature searches of relevant websites and a free text internet search were conducted, in English, Finnish, French, German, Italian, and Spanish. The eligible population included women with viable foetuses experiencing third-trimester IOL.

Results: After removal of duplicates, 893 records were screened and 20 documents met eligibility criteria. Guidance was identified for all included countries. In general, guidelines specified that choice of intervention should depend on cervical findings and personal preference. Oxytocin was recommended for mature cervixes (generally defined as Bishop score [BS] ≥ 6) and either dinoprostone, misoprostol, or balloon catheters (BC) for immature cervixes (BS < 6). The exceptions were France, which only recommended dinoprostone for immature cervixes (misoprostol had no marketing authorisation at time of publishing; 2011), and Sweden, which recommended misoprostol only. Guidelines from Germany, Italy, Denmark, Norway and Sweden specified that misoprostol was most effective. UK guidance stated that the oral formulation was a benefit of misoprostol. Timing recommendations for IOL in all countries were within the 41st week, with Germany, France and Spain allowing elective IOL from 39 weeks.

Conclusion: Labour induction standards are similar across Europe. Misoprostol is recommended first-line or joint first-line with dinoprostone for pharmacological IOL when BS < 6, and oxytocin for BS ≥ 6. BCs are viable mechanical alternatives to prostaglandins for immature cervixes.

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Influence of covid-19 pandemic on patients with gynecological cancers

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Introduction and objectives: The COVID-19 pandemic had significantly influenced the fears and behaviors of patients with gynecological oncology disease. Deficiency of immunocompetence in case of cancer is a risk factor of COVID-19 infection.

The objective of the study was to know fears of oncological patients during pandemic to improve their behaviors and quality of life.

Methods: A cross-sectional survey of 95 patients with diagnosis of gynecological cancers with mean age 52.93 years of Outpatient Oncological Clinic was performed from December 2021 to July 2022. Population was divided into 2 groups: patients after chemotherapy during pandemic (34 ovarian, 7 endometrial, 2 cervical cancers) and without adjuvant treatment (4 ovarian, 39 endometrial, 5 cervical and 4 vulvar cancers). Analysis was also performed according to age of patients: under 65 years old (81 patients) and above 65 (14 patients). Statistical methods of analysis were used.

Results: Patients after chemotherapy during the pandemic were more afraid of modification of oncological hospitals into infectious disease ones (51.1%) and risk of interruption of treatment because of infection (32.5%). 28.8% of patients without adjuvant treatment declare no changes of everyday life, while 18.6% of the other group. Patients under 65 were more afraid of COVID-19 disease (50.6%) than the impact of pandemic on progression of cancer (37.6%), while in older age 14.3% and 71.4%. Patients with ovarian cancer (53.8%) were more afraid of SARS-CoV-2 infection than patients with endometrial cancer (38.3%).

Conclusions: Adjuvant treatment during the pandemic is a risk factor of higher level of fear and use of protective methods of COVID-19 infection. Younger patients were more afraid of new infection than progression of cancer. Further investigations should be considered regarding the influence of COVID-19 vaccination.

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Risk factors of the endometrial pathology (including tamoxifen): Retrospective analysis of 664 biopsies

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Introduction: Endometrial pathology including endometrial cancer has well – known risk faktors : age, , early menarche, late menopause, nulliparity, unopposed estrogen therapy and metabolic faktors like obesity and diabetes.

Purpose: The aim of the study was to determine which factors were associated with the endometrial pathologies among women undergoing an endometrial biopsy in the Department of Fetal Medicine and Gynaecology of Medical University of Lodz, Poland between 2016-2020.

Methods: Investigated group were breast cancer patients treated with tamoxifen in the past, with the control group of patients recruited during routine check-ups. To investigate the influence of risk factors on the occurrence of endometrial pathologies, backward stepwise logistic regression analysis was performed. We evaluated also the independent predictive value of tamoxifen by including or excluding this variable from the final model.

Results: 664 patients were enrolled in the study, and 70 had breast cancer in the past and were treated with tamoxifen. A cut-off point of endometrial thickness 10.5 mm had 72.0% sensitivity and 57.7% specificity in predicting the occurrence of endometrial pathology. Multivariable analysis was applied to determine the factors associated with endometrial pathologies. Age, BMI, endometrial thickness greater than 10.5 mm, diabetes mellitus type 2 (T2D) were independently associated with endometrial pathologies only in patients with abnormal uterine bleeding. Including tamoxifen to this model had no significant impact on the prediction of endometrial pathology.

Conclusions: Tamoxifen as an additional risk factor of endometrial pathology had no impact on endometrial pathology in our model.

Abnormal uterine bleeding seems to be the most important strong clinical feature and risk factor predicting endometrial patgology.

Endometrial thickness cut-off point above 10,5 mm was associated with endometrial pathologies.

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Peripartum hysterectomy in adolescent girls in Slovakia

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Introduction and aims: Young mothers are most affected by the removal of the uterus in view of the impact on future fertility options. The main aim of study was to assess the incidence of peripartum hysterectomy (PH) in adolescent girls in Slovakia. Additionally, we wanted to explore reasons for the procedure, associated clinical circumstances and complications.

Materials and Methods: This was a retrospective population-based study involving all births that took place in Slovakia between January 2012 and December 2020. PH was defined as surgical removal of the uterus from the peripartum period up to 42 days postpartum. Data were obtained from the standardized questionnaires that are completed in Slovakia for any case of PH.

Results: In the studied period, there were total of 397 cases of PH performed in Slovakia – incidence 0.91 per 1,000 births. Out of them, 4 PH (1.0 %) were women in the age 15-19 years. The incidence of PH in adolescent was 0.15 per 1,000 births, (RR 0.28, 95% CI 0.11-0.77). No case of PH under 15 years was recorded.

All 4 adolescents were of Roma origin, with low level of education. Three of them had the 2nd pregnancy with cesarean section in the previous pregnancy and an interval between pregnancies was less than 2 years. Three hysterectomies were performed at the time of repeated caesarean section - in 2 cases the indication was uterine rupture and in 1 case placenta previa accreta. The 4th PH was performed 14 hours after vaginal delivery for uterine atony.

Conclusion: The incidence rate of PH was significantly lower in teenage mothers. However, the incidence could be even lower if three patients avoided repeated pregnancies. Within 2 years after the first pregnancy, adolescent mothers are more at risk of pregnancy complications and associated with increased adverse maternal and perinatal outcomes.

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The process leading to physician activism for sustainable change

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Introduction: Health systems all over the world are in a process of transition and may even need a paradigm shift for sustainable development. This is where activism may play a role. This study focused on why some physicians become activists and how these physicians have either achieved successes or failed to do so.

Methods: This study is inspired by grounded theory. Semi-structured, in-depth interviews were conducted to evaluate the experiences of seven purposefully sampled physician-activists from the Netherlands.

Results: Our research suggests that activism originates from an awareness of problems in the area of health inequalities, resulting in moral discomfort combined with a strong drive to speak up against perceived failings, even when personal risks may be involved. Activists that were most successful in achieving political and health changes meandered effectively along the borders of the system, taking care to preserve ties with supporters within that system and, at the same time, taking a relatively isolated position while using strategies to oppose the system. Diverging too much from the system resulted in measures taken by the system to silence them.

Conclusion: Successful activism may be regarded as a social and professional skill that may be learned.

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Vaginal microbiome disorders as the prognostic factor in the hpv hr related precancerous lesions

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Physiological vaginal microbiome is the main element of local immunological protection against dangerous viral infections such as HIV, HSV2 and HPV HR related with cervical carcinogenesis. The most desirable elements are Lactobacilus crispatus (CSTsI), L. gasseri (CSTsII) and L. jenseni (CSTsV) because of the lactobiocins secretion. L. iners (CSTsIII) doesn't produce bacteriocin and haven't protective influence against viral infections. Vaginal dysbiosis (CSTsIV) is correlated with a great risk of the viral persistent infections especially HPV HR types and induction of cervical intraepithelial carcinogenesis.

The aim of our study is the retrospective analysis of 200 cases of women with PCR DNA HPV HR positive results into various stages of intraepithelial lesions (without SIL, L SIL (CIN1), H SIL (CIN2), H SIL (CIN3), early invasive carcinoma). Vaginal microbiome was examined using morphotype criteria published by G. Ventolini (USA, 2020) in phase-contrast microscope direct vaginal smears.

We observe the correlation between optimal vaginal microbiome at the early stages in carriers without SIL or L SIL, but increased incidence of L. ines (CSTsIII) in L SIL and HSIL (CIN2) and dysbiosis (CSTsIV), BV, AV, mixed Cooccus and Candida infections at the advanced stages H SIL (CIN3) and early invasive carcinomas. Another factor of SIL progression was the incidence of the HPV HR types 16, 31, 33, 18, 52, 58, 45. Other HPV HR types 35, 39, 51, 56, 59, 66, 68 rarely corresponds with the risk of SIL progression.

Vaginal microbiome disorders are easy to examine in phase-contrast direct smears and in combination with HPV RH genotyping seems to be an important prognostic factor of SIL progression risk.

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Fibroadenoma of the breast – Diagnostic misleads

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Introduction: Examination of breasts as well as consulting results of radiological imaging tests remain duty of gynecologist. It is important any gynecologist gets appropriate knowledge about frequent pathologies concerning breasts and remains aware of diagnostic traps.

Purpose: The purpose of the presentation is to deliver the knowledge about fibroadenomas of the breasts, with the special emphasis on differential diagnosis.

Methods: The presentation is based on publications of international authors published during last ten years (years 2012-2022) and enriched with own interesting images.

Results and discussion: Fibroadenoma od the breasts (FA) is the most common benign tumor of the breasts among women and appear with the overall incidence 25%. The peak age for FA places itself between age of 20-30, although FAs account for 50-60% of breasts lumps of adolescent girls. FAs are single or multiple, usually do not grow beyond 3cm. There are a few types of FAs. The most common is simple FA (SFA), which includes about 80% of all FA cases. FA derives from proliferation of stromal and epithelial components of TDLU (terminal duct lobular unit). In ultrasound examination FA usually presents pattern for benign tumors. New techniques such as elastography, microvascularisation assessment, and branch of radiology – radiomics with digital image processing, come helpful. Fibroadenomas must be differentiated from other pathologies presenting similar images, but what is more important from lesions of increased risk of malignancy and cancers. Breast tumors of uncertain or increased risk of malignancy are gathered in the B3 group of histopathological classification. TNBC (triple negative breast cancer) can be easily ignored due to its spreading, rapid growth resembling FA.

Conclusions: The knowledge about pathologies of the breast, especially frequent ones, is necessary for gynecologist. Each fibroadenoma found in breast should be carefully examined bearing in mind differential diagnostics.

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Termination of pregnancy in Greece. Intersecting views among women and gynecologists

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Introduction / Aim of the study: Of the 73 million abortions taking place every year, 25 million are considered unsafe, mostly in countries with strict legislation. However, even in countries where termination of pregnancy (TOP) is legal, WHO has identified factors hindering safe and timely access. In Greece, elective TOP has been legal since 1986, with the law emphasizing the state's responsibility in providing free and safe TOP.

Studies on the experience of people who underwent a TOP, as well as outlooks of healthcare workers involved are numerous worldwide. However, there is little research on the intersection of viewpoints between people undergoing a TOP and OB/GYNs. Furthermore, qualitative literature concerning TOPs in Greece is lacking. The current study aspires to fill these research gaps.

Method: For the purpose of this study, qualitative methodology was selected. Through snowball sampling, 31 women who had a TOP in Greece and 33 active gynecologists were interviewed in semi-structured interviews. The transcripts were explored using thematic analysis.

Results: Results are separated into two segments. In the first, women's experiences of TOP are presented and juxtaposed with OB/GYNs practices. In the second, the perceptions of both gynecologists and women regarding the fetus and the procedure are discussed. Various justifications for undergoing or providing a TOP, as well as differences between public and private health sector are further analyzed.

Conclusion: Results indicate access issues concerning TOP in the public sector. Several factors undermining safe abortion according to WHO were recognized, such as obligatory waiting or counselling, while abortion stigma emerged as a constant both for OB/GYNs and women. Further research on access to TOP needs to be conducted to explore the extent of this issue and define potential health policies that will ensure accessibility and patient safety.

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How to improve the management of pregnancy in a patient with cystic fibrosis during cftr modulators therapy

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Introduction: Cystic Fibrosis (CF) is an inherited disease caused by mutations in cystic fibrosis transmembrane conductance modulators (CFTR). It affects mostly respiratory and digestive systems, but the impairment of reproductive tract was also confirmed. This study presents a case of the first, to our knowledge, patient in Poland who conceived and delivered while receiving new treatment (CFTR modulators).

Case presentation: The subject was 21-year-old woman with CF who was referred to the hospital during 35 weeks of pregnancy. She reported abdominal pain and the suspicion of fetal growth restriction (FGR). Her medical history included pregestational diabetes mellitus, hypothyroidism and depression. Before the pregnancy she had been treated symptomatically due to CF. Then, after the change of therapy for CFTR modulators, her general condition improved, and she conceived spontaneously. During hospitalization several diagnostic tests were performed. Patient was consulted interdisciplinary with different specialists to establish the proper management. FGR was confirmed, fetus wellbeing was closely monitored. What was unusual, patient's blood glucose level tended to be too low. The insulin therapy was stopped, yet the patient still presented sudden drops of glycemia. The pregnancy was terminated with C-section due to the high risk of diabetes decompensation and high risk of stillbirth. The female infant was delivered prematurely in general good condition. Proper postoperative care was ensured.

Conclusions: The multidisciplinary approach is crucial as the maternal issues might be extensive and proper care must be provided to improve perinatal care and prognosis for mother and baby. General recommendations in Poland should be created to establish some important guidelines regarding time and method of delivery and the details of perinatal care, as pregnancies in women with CF are expected to become more common.

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Impact of Doppler uterine artery pulsatility index (ut-a pi), plgf serum level on fetal growth restriction between the 2nd and 3rd trimester

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The blood flow through the uterine increases during pregnancy because of the vessel remodeling caused by placentation. Spiral arteries become low resistant and high capacitive. Normally, the resistance of the uterine artery (Ut-A) will decrease with a more advanced week of gestation. The pulsatility index of uterine artery and placenta growth factor (PlGF) are well known predictive markers of placental blood flow disorders, as: PE, FGR, SGA, abruption placenta, preterm labour, late miscarriages, IUFD. The aim was to study impact of uterine artery PI and PlGF level on fetal growth restriction.

In 199 singleton pregnancies, a measurement of PlGF and Ut-A PI in 1st trimester was assessed retrospectively. Evaluation of fetal weight was performed in 2nd and 3rd trimesters. A multivariate logistic regression model was calculated between fetal growth, MoM PlGF and average Ut-A PI.

In our study group included 20 patients with pathological and 179 with normal Ut-A PI. We found a negative correlation between Ut-A PI (median Ut-A PI and separately the right artery, r = −0,155 and r = −0,164, respectively) and the fetal weight gain between 3rd and 2nd trimesters of gestation median. The PlGF level was related to the average Ut-A PI (p = 0,013). The MoM PlGF values was an independent risk factor of inappropriate weight increase between 2nd and 3rd trimesters aOR = 0.05 (95%CI: 0,01–0,36) with AUC 0,737.

Pathologic placentation, shown as increased Ut-A PI and decreased PIGF is significant with inappropriate growth of the fetuses between 2nd and 3rd trimesters. PIGF is independent from Ut-A PI risk factor of inappropriate fetal growth.

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An audit of colposcopy cases for cervical cancer prevention in lithuanian hospitals

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Introduction and aims of the study: The accuracy of colposcopy as the gold standard to manage abnormal screening tests depends on qualification and well defined standards. First analysis of quality indicators (QI) for colposcopy was performed by European Federation for Colposcopy (EFC) in 2015. The aim of this study was to perform an audit of QI for colposcopy in Lithuanian Hospitals.

Methods: A retrospective analysis of 93 medical records with performed colposcopy due to prior abnormal cervical screening test was conducted in three different Lithuanian Hospitals (A, B, C) from 2020/01/01 to 2021/12/31. All collected data from medical records that included forms of colposcopy findings and biopsy results was evaluated by 4 core and 9 extended QI.

Results: None of the Hospitals analyzed met all of the EFC proposed QI, however leading results were observed in the University Hospital. Three out of 13 QI (performed colposcopy before treatment, recorded treatment type and possibility to discuss cases with multidisciplinary team) totally met the criteria in all the Hospitals. However, the colposcopic opinion was recorded only in one third (32.8%) of all cases analyzed, 88%, 10,3% and 0% in Hospitals A, B and C, respectively.

The results of cytology or HPV tests and rates of success after treatment were not evaluated due to the variety of organizational patient monitoring in Lithuania. No cases of pregnant women or patients with adenocarcinoma in situ took place in this audit.

Conclusions: Audited Lithuanian Hospitals do not meet most of the core and extended quality indicators proposed by EFC. Colposcopy centers with trained colposcopists should be discussed.

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A true umbilical cord knot- one diagnosis and two different perinatal outcomes

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Introduction and aims of the study: True umbilical cord knot (TUCK) reported in 0,3%–1,2% of all pregnancies is associated significantly with preterm birth, intrapartum fetal distress, fetal acidosis, low Apgar score at the first minute, higher risk of cesarean delivery and intrauterine fetal death. This study aims to identify possible associations between fetal heart rate (FHR) patterns, TUCK and perinatal outcome.

Methods: Healthy 32-year-old gravida 2, para 2 and 28-year-old primipara at 41 weeks of gestation had premature rupture of membranes and lack of contractions. Both patients had induction of labour.

Results and discussion: In the first case during labour cardiotocography(CTG) recorded increased baseline FHR with episodes of saltatory patterns on oxytocin and variable decelerations followed by late complicated decelerations with slow progress of labour. Neonate was born by Category II Caesarean section with a double TUCK and Apgar score was 9/9. Cord blood gases were normal. Whereas in the second case during labour CTG recorded normal baseline FHR with normal variability and variable decelerations followed by a ZigZag pattern(ZZP). ZZP is periodically repeated for at least 2 minutes and is followed by repetitive late decelerations and decreased variability. Normal frequency of uterine contractions. The fetus was born in a vacuum–assisted delivery with a tight nuchal cord and a TUCK. Apgar score was 4/5/7. Perinatal hypoxia resulted in fetal death after 21 h of living.

Fetal CTG is a dynamically changing method of fetal well-being assessment in labour. Fetus itself, maternal positioning, oxytocin and other factors have an impact on CTG trace dynamics. It is important to diagnose fetal deterioration early to avoid bad perinatal outcome.

Conclusions: The main finding of this study is that ZZP and decreased variability were associated with adverse perinatal outcomes.

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Sarcoma or venosus malformation – Case report of patient with induration and pain of the thigh

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Symptomatology of severe thigh pain with accompanying induration and difficulties with walking according to pregnant women can be worrying. Despite soft tissue sarcoma are rarely diagnosed during pregnancy you have to think about the possibility of that diagnosis.

25-year-old patient was admitted to Department of Obstetrics and Gynecology, Bielanski Hospital at 20 weeks of gestation due to the left thigh pain and difficulties with walking since the last few days. Till that time pregnancy was uncomplicated. The woman had 5 surgeries for lower limb varicose veins in the past. Ultrasound scan and MRI without contrast revealed a mixed solid and fluid-filled tumor and soft tissue sarcoma needed to be excluded. The biopsy was performed, however the histopathology examination did not confirm the sarcoma. It occurred to be a venosus malformation. The symptoms did not occur again until delivery. The patient delivered at 40 weeks a healthy girl weighting 3270g. 2 days after delivery control MRI with contrast was performed and revealed intramuscular venosus malformation smaller then in previous MRI.

Intramuscular venous malformations (VM) are often located in the distal thigh. The patient was qualified for the treatment to avoid recurrent symptoms in the future.

Diagnostic imaging during pregnancy can be confusing. Histopathology examination is a gold standard in determining the presence of neoplastic disease.

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Fetal death and early neonatal mortality after assisted reproductive technologies and spontaneus conception in 2010–2021 at 1st department gynaecology & obstetrics faculty of mediciny comenius university and university hospital in bratislava

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Introduction: More than 8 million children are born using ART methods (assisted reproductive technologies) every year. Data about reproductive outcomes after ART are not clear-cut. Aim of study was to analyze fetal death (FD) and early neonatal death (END) cases at 1stDepartment Gynaecology &Obstetrics Faculty of Medicine Comenius University and University Hospital in Bratislava, Slovak Republic.

Methods: Retrospectively were compared FD and ENM in pregnancies after ART with pregnancies after spontaneous conception in the years 2010-2021. During this period at Department were 35,890 deliveries, out of them 947 (2.6%) after ART and 34,943 after spontaneous conception.

Results: Total 177 children died in study period, out of them 19 (10.7%) were after ART and 158 (89.3%) after spontaneous conception. Mortality after ART was 2.01% and after spontaneous conception 0.45%. FD rate after ART was 0.42% and after spontaneous conception 0.23% (1.8-times difference). ENM rate after ART was 1.58% and after spontaneous conception 0.23% (6.9-times difference). Out of 177 died children 21 was from multiple pregnancies. Multiple pregnancies mortality after ART was 7.91% and after spontaneous conception 3.95% (2-times difference). Frequency of FD from multiple pregnancies after ART and after spontaneous conception was the same – 2.26%. ENM from multiple pregnancies after ART was 5.65% and after spontaneous conception was 1.64% (3.4-times difference). The average age of mothers with FD and END (regardless of conception) was 31.6 years, after ART 36.6 years, and after spontaneous conception was 30.7 years.

Discussion: FD and END is significantly higher in pregnancies after ART. The average age of women with FD and END was also significantly higher in pregnancies after ART. This data are similar to data from many others published papers.

Conclusions: Pregnancies after ART are in higher risk of FD and END comparing with spontaneous conception according to data from our limited study (947 pregnancies after ART).

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Threatened preterm labor: Are we overtreating? – The reality of a Portuguese central hospital

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Introduction and aim: Preterm birth occurs between 24 and 37 weeks' gestation.

Only a minority of women who present with preterm contractions known as threatened preterm labor (TPTL) progress to actual labor and delivery.

A course of antenatal corticosteroid therapy (ACS) administered to women at risk reduced the incidence and severity of respiratory distress syndrome (RDS) and mortality in offspring.

Aim: Analyse the threatened preterm labor admissions and determine the proportion who had a term labor or more than 7 days after the diagnose and realized ACS.

Methods: Authors analysed the clinical data related to all preterm deliveries and threatened preterm labor (TPTL) admissions, of singleton pregnancies, at Hospital of Faro (CHUA), from October 1st 2021 and June 30th 2022. Data were collected by consulting the clinical process (SClinico®software).

Results: There were 46 hospital admissions with the diagnosis of threatened preterm labor (contractility and short cervix) in the study period. In this group: 15% (n = 7) had an immediate delivery, 50% (n = 23) had a delivery >7 days after the diagnose of TPTL and 20% (n = 9) delivered >37 weeks.

The median value of cervicometry obtained at the moment of TPTL admission were 15.5 mm.

Conclusion: Administration of ACS for TPTL resulted in overtreatment in many cases. A meta-analysis reported that 53 percent of patients with threatened preterm labor were undelivered seven days after diagnosis, this are consistent with our data.

Future investigations are necessary to identify the real cases of TPTL that evolute to labor in order to optimize care in this setting.

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Evaluation of oncofertility care in girls diagnosed with cancer, the eu-horizon 2020 trel project

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Introduction and aims of the study: While the five-year survival rate of childhood cancer exceeds 80%, many survivors develop late effects including infertility. Most survivors perceive the information regarding fertility as insufficient. The aim of this study was to evaluate oncofertility care in girls diagnosed with cancer at Vilnius University Hospital Santaros Klinikos (VULSK) using the oncofertility-care-evaluation-questionnaires within the framework of the EU-HORIZON 2020 TREL project.

Methods: All parents or girls aged 12–17.9 years treated from July 1, 2021 until July 1, 2022 were invited to complete oncofertility-care-evaluation-questionnaires applicable for international multi-center use. A previously published tool (triage) by the Princess Máxima Center was used after the evaluation to stratify respondents to low (LR) or high risk (HR) of gonadal damage.

Results: Twenty-six questionnaires were completed by 23 parents and 3 girls. All respondents (n = 26) were triaged to 18 (69.2%) of LR and 8 (30.8%) of HR of gonadal damage. Only 9/26 (34.6%, 6 LR, 3 HR) respondents correctly identified their gonadal damage risk. None of the girls was counseled by an oncofertility specialist. The majority (14/26, 53.8%) agreed the risk for fertility impairment was mentioned by a pediatric oncologist. Less than a half (10/25, 40%) of respondents agreed they knew enough about fertility, 11/25 (44%) knew their fertility preservation options, 7/25 (28%) had to ask for information about fertility themselves. Only 7/25 (28%) received supportive material on fertility.

Conclusions: The minority of respondents correctly identified their infertility risk. Results revealed a lack of information on fertility and a need for the provision of supportive material. Oncofertility care at VULSK needs improvement, there is a need for triaging patients before the cancer treatment and providing suitable information/counseling. National regulations restricting fertility preservation options for children ≤14 years may partially explain the lack of counseling in HR patients.

Keywords: Childhood cancer; fertility counseling; late effects; questionnaire; reproductive health.

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Correlation of the mobile colposcopy eva system with ai algorythm visualcheck2.0 and mobilab hpv 16/18/31 antigen rapid test in daily gynecological practice

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Currently in cervical pathology we have 3 methods available: cytology (PAP), colposcopy and HPV molecular testing, but none of those methods is enough to eliminate risk of cervical cancer development.

Our aim is the practical use of two methods: mobile colposcopy supported by IA algorithm Visual Check 2.0 created and developed by Mobile ODT in correlation with MobiLab Rapid Antigen 16/18/31 HPV tests in daily practice. Results of both methods are possible to obtain during a single visit in gynecological office after 20 min. We established the procedure of collection of the cervical mucus in speculum by Dacron swab before the 3% acetic acid intravaginal application.

The decision to continue the HPV rapid antigen testing (dropping the reagents) was made after the result of AI evaluation of cervical images captured by a mobile colposcope Eva System, if the VisualCheck algorithm results were abnormal (duration of the analysis is about 2 minutes) or if colposcopy was inadequate because of invisibility of the TZ. Results of the qualitative Rapid Antigen 16/18/31 test were ready after 10 minutes.

At the end of the visit, we have all results: colposcopy, phase contrast cytology, TSV-USG and 16/18/31 HPV antigens presence. Such procedure allows to select women with very high risk of HPV related cervical pathology during first examination or exclude other with lower risk. In the next step high risk group was verified by biopsy, the lower risk group was verified by Cobas 18 types of PCR DNA HPV genotyping.

Correlating colposcopy with Rapid Antigen 16/18/31 HPV test seems to be rational and economically justified in daily gynecological practice.

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En caul cesaren delivery- own experiences

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Objectives: The “en caul” cesarean delivery means extracting the fetus in the amniotic sac together with a placenta. Our study compares the condition of newborns born prematurely by “en caul” and unmodified caesarean section. The aim of the study was to assess the possibility of improving neonatal outcomes by modifying the method of delivery.

Methods: The study group consisted of 15 newborns born by cesarean section at the Department of Obstetrics and Gynecology of the University of Gdańsk in 2022–2023. Average age of pregnancy was between 23 + 4 and 31 + 0. Fetal extraction was performed en caul. The following parameters were assessed: general condition and Apgar score after birth, early respiratory disorders, required respiratory support, first measurements of the level of hemoglobin, hematocrit, red blood cells count and the amount of blood transfusions during hospitalization. The study group was compared with a group of 14 newborns born at a similar gestational age (23 + 2 to 31 + 2) by traditional caesarean section.

Results: Performing caesarean section with extraction of the fetus in the amniotic sac determined better general condition of newborns. Moreover, they required less use of mechanical ventilation- the use of the CPAP method was sufficient. Early respiratory disorders were absent or less severe. However, the levels of laboratory parameters were higher in the control group. More blood transfusions were performed in the study group.

During 8 procedures the amniotic fluid drained during cesarean section and the umbilical cord was cut by the operator.

Conclusions: The en caul cesarian delivery is a very promising method, requiring further follow-up and monitoring of results.

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External cephalic version – May we safely prevent unnecessary cesarean sections? Our own experience

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Non-cephalic fetal lie is observed in approximately 4% of full-term pregnancies. External cephalic version (ECV) is an alternative to caesarean section for abnormal fetal position. The comparison of mode of delivery indicates that vaginal birth is associated with lower overall maternal severe morbidity and mortality. This is why obstetricians should aim to decrease cesarean section rate. ECV is recommended by the most important scientific societies in the world. The procedure is dedicated to women after 37 weeks of pregnancy, after excluding contraindications. ECV complications are rare and occur in 6.1% of cases, however severe complications requiring urgent caesarean section are found in less than 0.4%. Our aim was to demonstrate the effectiveness and safety of ECV.

Material and methods: 49 patients, with mean age 31,7 years, mean gestational age 38,1 hbd were qualified for the study. The group consisted of 25 nulliparas (51%) and 24 multiparas (49%). Qualification criteria included: singletone gestation, gestational age $>36+6$, longitudinal pelvic lie, no uterine contractions, intact membranes. The complication of the procedure was considered to be rupture of membranes or indications for immediate caesarean section within 24 hours from ECV. In patients with those complications, the condition of the newborn was checked according to the APGAR score and the day of discharge of the mother and child from the maternity ward was analysed.

Results: ECV finished succesfully in 65,3% (nulliparas 56% and multiparas 75%). In our patients, there were 4 cases of complications requiring delivery at the time of ECV. No serious consequences associated with increased maternal or neonatal morbidity or mortality were reported.

Conclusions: ECV seems to be a safe alternative for women wishing to deliver vaginally, as this procedure does not increase the risk of adverse obstetric outcomes.

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Mode of delivery of labour induction in nulliparous women with singleton term pregnancy and cephalic presentation – In 5-year period

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Introduction and aims of the study: Induction of labour (IL) is a common obstetric procedure, but it is questionable whether it results in higher Caesarean section (CS) rates.

The aim of the study is to evaluate the mode of the delivery of labour induction in nulliparous women with singleton term pregnancy and cephalic presentation and its contribution to the overall rate of CS.

Methods: A retrospective study was contacted that included nulliparous women with singleton term pregnancy and cephalic presentation whose labour was induced in the secondary perinatal care centre (Riga Maternity Hospital, Latvia) from 2018 to 2022.

Results: In total, in the study 4183 women (2018–608, 2019–795, 2020–812, 2021–989, 2022–979) were included. During the 5-year period, the study group made from 10.2% in 2018 to 19.3% in 2022 (2019-13.6%, 2020-15.2%, 2021-17.2%) of all deliveries. Although the CS rate of the study group has decreased from 30.4% in 2018 to 21.6% in 2022 (2019-24.9%, 2020-25.0%, 2021-24.4%), the absolute contribution of the group to the overall CS rate has increased from 3.1% in 2018 to 4.2 % in 2022. The operative vaginal delivery rate has increased (2018–6.1%, 2019–11.1%, 2020–14.2%, 2021–13.1%, 2022–16.6%). During this period, the induction method was changed. At the beginning of the period (2018, 2019), it was Misoprostol orally. The combined method (transcervical Foley catheter and Misoprostol orally) was introduced in 2020 and was used during 2022 for all pregnant women without prostaglandin contraindications.

Conclusions: Analysis of the group of specific patients allows a detailed understanding of the mode of delivery, and the absolute contribution of the group to the overall rate of CS and the creation of a focused strategy for its reduction in specific groups of patients.

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Analysis of labor induction in the gynecological-obstetric department of the krapkowice health center

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Introduction and study objectives: Labor induction is one of the most common procedures in obstetrics. The list of mother and fetal indications for labor induction is wide. Study presents the labor induction scheme adopted in the Gynecological-Obstetric Department of the Krapkowice Health Center.

Methods: The analysis included a group of 104 pregnants qualified for labor induction. The procedure scheme was based on degree of cervical maturity (Bishop scale) and included: preinduction with a Foley catheter and/or dinoprostone (Cervidil), induction of labor with Oxytocin. The degree of cervical maturity before and after each procedure, the time of the Cervidil preparation, the length of stages of labor, the average blood loss during labor, the Apgar scale of newborn's, the numer of vaginal birth and cesarean section were evaluated.

Results: 73% of labor inductions ended with vaginal birth. 11% of deliveries were induced only after a Foley catheter insertion and 29% after use of Cervidil, 60% required Oxytocin. 46% of cesarean sections were performed due to fetal heartbeat disturbances, and 50% due to lack of contractile activity and lack of progress of labor. The average duration of Cervidil use was 12 hours. The average length of first stage of labor was 4 hours. The average peripartum blood loss was 253 ml. The newborn's Apgar scale in the first minute of life was 8 points.

Conclusions: The analysis conducted at the Krapkowice Health Center showed a high rate of successful labor inductions with a relatively low rate of inductions ending in cesarean sections. It was proven that labor induction is an effective and safe procedure, allowing for a reduction in the rising number of cesarean sections.

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The influence of dietary patterns on a course of endometriosis – From newborn to adulthood

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Introduction and aim of the study: It is supposed that a diet is an important factor in the development of endometriosis and can affect the course of the disease. The “satiety hormone”, fruit, tea and vegetables, as well as various dietary compounds may have an impact on angiogenic and immune processes mediated by biologically active substances (cytokines, growth factors etc.) known to be crucial in the pathogenesis of endometriosis.

Methods: A literature review was conducted using the electronic databases PubMed, MEDLINE and EMBASE with the search terms ‘nutrition’, ‘endometriosis’, ‘diet’. The rewiev evaluated articles published in the English language until September 2022.

Results: Chronic pelvic pain in endometriotic patients is related to a lower BMI. These results are explained by decreased appetite, chronic stress and nutritional-poor diet. Supplementation of omega-3 fatty acids may decrease the growth of endometrial implants and the production of inflammatory factors, especially in patients with stage III or IV of endometriosis. Also, women who eat “healthy food” and exclusively breastfed for at least 6–8 months experienced a significant reduction in dysmenorrhea and acyclic chronic pelvic pain. In 68% of the cases a reduced size of ovarian endometriomas and prolonged recurrences were also observed.

Conclusions: Modifications caused by a diet and environmental factors may be necessary for the transition from subtle changes in endometriosis to symptomatic disease. Proper eating habits implemented from an early age and a well-balanced diet may improve quality of women’s life and increase the chance of having desired offspring. The knowledge of the phenomena related to the formation of ectopic lesions and the progression of the disease allow to implement preventive strategies more effectively and improve the quality of life.

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The vaccination coverage of the Greek population and worldwide, with the vaccine against the Human Papilloma Virus

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Human Papilloma Virus (HPV) is the most common sexually transmitted disease. In 2006, licensed for the first time the vaccine against HPV. The Word Health Organization has set the goal of vaccination coverage of 90% of the population by 2030. The aim of this study is to investigate the vaccination coverage in Greece in comparison with other countries of the world as well as the factors that determine it. METHOD: A literature review was conducted for studies published between June 2006 and June 2022 RESULTS: There are no official data on vaccination coverage in Greece against the HPV virus, it is believed to be around 55%. CONCLUSION: HPV vaccination coverage in Greece is low compared to other countries in the developed world and efforts should be made to reach the goal set by the World Health Organization.

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Micrornas expression in the cell fraction of human milk in women with genital tract infections

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Background: Human milk (HM) is a unique biological fluid that is enriched with immunological components, including microRNAs (miRNAs), which affect the development of the infant’s immune system. MicroRNAs are small non-coding RNAs that regulate gene expression at the post-transcriptional level. Maternal health conditions affect the content of bioactive molecules in breast milk. The aim of this study was to investigate the impact of genital infections during pregnancy on the expression of selected microRNAs in HM.

Methods: HM samples were collected on the third postpartum day from two groups of patients, women with genital tract infections during pregnancy (n = 8) and women without genital tract infections (n = 23). The microRNA was isolated from the obtained human milk cell fraction. The expression of selected microRNAs was assessed by qPCR in the StepOne Plus system.

Results: The expression profiles of microRNAs differed between the two study groups. In HM samples from women with genital tract infections during pregnancy (n = 8), the expression of mir126*, mir21, mir26b and mir29a is statistically significantly lower compared to the expression of HM obtained from patients without genital tract infections during pregnancy (n = 23). In the group of patients with genital tract infections, there was an almost 4-fold decrease in expression for mir126* ($p = 0.005$), a more than 3-fold decrease for mir21 ($p = 0.02$), more than 5-fold decrease for mir26b ($p = 0.029$) and more than 10-fold decrease in expression for mir29a ($p = 0.019$). There were no significant differences in the expression of the examined microRNAs depending on the method of delivery, order of pregnancies, week of pregnancy, other comorbidities or mother's age.

Conclusions: In this study, maternal genital tract infections during pregnancy were associated with the expression of breast-milk-derived miRNAs. Further studies are needed to understand the molecular mechanisms of these microRNAs and the importance of downregulation for the breastfed infant.

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Acute pancreatitis in pregnancy and postpartum: Four case reports

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Introduction: Acute pancreatitis can be a life-threatening condition at any stage of life. It is seen in up to 3 in 10 000 pregnancies, Diagnosis in pregnancy & postpartum can be more challenging, and its etiology is distributed differently to that of the nonpregnant population.

Summary: .We report a series of 04 cases of pregnant women, treated for acute pancreatitis from 2019 to 2021. Their average age was 24.25 years , three antenatal cases and postnatal and the diagnosis was based on clinical-biological clues: unresolved backache, hyperemesis , epigastric pain with strong elevation of lipasemia in few .Biliary etiology was confirmed in all patients initially by ultrasounds. Three patients had benign pancreatitis of favorable evolution. The third patient presented with a clinically severe pancreatitis dengue with thrombocytopenia focal pancreatitis . Treatment was mainly symptomatic (medical), with multidisciplinary input with favorable outcomes for both mother and baby.

Conclusion: Acute pancreatitis during pregnancy is a real threat for both the maternal and fetal prognosis and is a differential diagnosis that must be kept in mind for prompt management. The diagnosis is often difficult because the clinical symptomatology is atypical in pregnant women and the possibilities of imaging and surgery are limited. Acute pancreatitis during pregnancy is a major differential to consider in pregnant women with emesis associated to typical or atypical abdominal pain. Its diagnosis is essentially based on clinical suspicion and further evaluation. Multidisciplinary input is vital for better prognosis.

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Multiple uterine myomas – [LDQUO] versius [RDQUO] robotic surgery complicated by vesicovaginal fistula

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A 46-year-old female patient presented to a gynecologist because of severe lower abdominal pain, which had been increasing over the year. An ordered CT scan of the lower pelvis revealed: an enlarged uterus, heavily remodeled with subserosal and intramural myomas. Four large post-sural myomas up to 70 mm in diameter, growing out of the anterior uterine wall. About 7 intramural myomas up to 40 mm in cross-section. In the left iliac fossa, above the uterus, a large tumor mass with a cross-section of 125x70 mm, the upper pole of the tumor outside the imaging area. Tumor well demarcated, very heterogeneous with extensive fluid areas inside. Lesion connecting with a narrow pedicle to the left pole of the uterine fundus. Strong pressure of the tumor mass on the right adnexa. Widened right ovarian vein up to 7 mm in diameter. The patient qualified for attempted removal of the uterus along with the fallopian tubes assisted by the surgical robot “Versius”. The procedure took place in December 2022 and lasted 4 hours 25 minutes. The patient was discharged home in general good condition on the 3rd postoperative day. Histopathological result showed 14 myomas with the diagnosis of leiomyomata focalem hyalinica multiplices. On the 12th day after the procedure, the patient presented with a suspected vesicovaginal fistula. A CT scan of the pelvis with urographic phase performed on that day showed leakage of shadow urine outside the urinary tract - a probable cavity in the bladder wall near the mouth of the right ureter. The patient was discharged home with recommendations to maintain the catheter for eight weeks, after which diagnostic tests of the lower urinary tract were performed. Currently, urine leakage is not found, the fistula in the stage of closure.

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Induction of labour: creation of a classification of Grenoble allowing an assessment of the evaluation of practices

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Background: Induction of labour, a very common obstetric procedure, affects about one in five pregnant women in most developed countries. Induction of labour is medically indicated, is subject to risks and additional costs, and is often poorly experienced by patients. The practices concerning induction vary widely from centre to centre and therefore need to be evaluated. Our aim was to develop a tool for evaluating induction of labour which would facilitate geographical and temporal comparisons.

Methods: We have created a classification based on the principles of the internationally known Robson classification. It should be simple, robust, reproducible and require readily available data in each file. The groups are fully inclusive and mutually exclusive. This classification has been validated by a Delphi method.

Results: Our classification includes 8 clinically relevant groups according to 5 obstetrical criteria. In order to classify each patient into a group, a simple system based on a maximum of 7 successive questions (from 1 to 7 questions) is used. Our classification has been validated by 13 national experts with satisfactory overall approval.

Conclusions: With a view to improving the quality of care, our Grenoble classification would allow a standardization of the evaluation of practices of the induction of labour over time in the same maternity hospital. It would also allow the comparison of practices within different maternity hospitals in a network, a country or even different countries.

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More than dysmenorrhea: Spontaneous vulvar endometriosis in adolescence

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Introduction: Endometriosis is characterized by the presence of endometrial tissue outside uterine cavity. It typically affects women of

reproductive age, being less common in adolescence. Vulvar involvement is usually associated with perineal trauma, but spontaneous occurrence is extremely rare.

Case Report: A fifteen-year-old-healthy girl presented at the gynecology emergency department with a cyclic pelvic and perineal pain associated with vulvar lesions with one year of duration. She had menarche at the age of 12 and reported regular menstrual cycles with severe dysmenorrhea. She denied coitarche, history of perineal trauma, urinary or gastrointestinal symptoms. On the gynecological examination, during catamenia, multiple small vinous papules, painful to the touch, along the medial surface of the left labia minora were identified. The biopsy of one of the lesions revealed histological characteristics compatible with ectopic endometrial tissue. The abdominopelvic ultrasound revealed a renal duplicity on the left, with no abnormal findings of the uterus, ovaries, and pelvic cavity. She started continuous estroprogestive therapy and on the 6 months follow-up, the patient reported control of pain, without reappearance of vulvar lesions.

Conclusion: Extrapelvic endometriosis is rare and is thought to be underdiagnosed. In this manner it is essential that gynecologists accurately investigate a woman with cyclic pain or lesions despite of its location, to prevent the progression of this complex disease and its complications.

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Relationship between the compulsory time spent at home and sexual functioning: A multicenter study

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Objective: Our aim is to investigate how sexual life is affected by the increase in the amount of time spent at home due to the restrictions of the Covid-19 pandemic. Also we aim to investigate if there is a relationship between depression, anxiety, amount of stress and sexuality.

Method: We selected to cities, one being a metropol Istanbul and the other being a rural city Rize. All patients in the out-paient clinic above 18 years who are sexually active, not pregnant, gave consent were included. Our questionnaire was made of sociodemographic form, Arizona Sexual Experiences Scale (ASEX) and The Depression, Anxiety and Stress Scale (Dass-21).

Results: A total of 459 participants took part in the study. Around half of the participitants (%50,1) were living in urban areas, while other half were living in rural. Depression, anxiety and stress scores were found higher in urban group. There was a statistically significant increase in weekly sexual intercourse frequency for both groups. No statistical difference in ASEX scores. Sexual desire and arousal scores were found significantly higher in rural group, lower in urban group.

Conclusion: Time spent home increased upto 24 hours during the pandemic. Time spent home effects frequency of sexual intercouse. Even though the level of education or income does not change, changing the city we live in can change sexual desire and arousal, along with depression, anxiety and stress.

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Comparing the efficacy of synthetic osmotic dilators with foley cathether and dinoprostone insert for cervical ripening in term pregnancies

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Introduction and aims of the study: Preinduction of labor is a commonly performed obstetrical intervention. One of the main factors for the success of preinduction of labor is advancement of cervical preparation on the Bishop score. Mechanical methods and vaginal prostaglandin E2 (dinoprostone) are the first-choice agents. The purpose of the present study will be to evaluate and compare the efficacy and safety of Dilapan-S (synthetic osmotic dilator) with Foley catheter and dinoprostone insert for cervical ripening in term pregnancies.

Methods: Pregnant women ≥37 weeks scheduled for induction with unfavorable cervix (Bishop score ≤4) will be qualified for the study. Pregnant women will be randomly assigned in 1:1:1 ratio to 24 hours of either Foley balloon inflated with 60 mL saline or 24 hours of dinoprostone or Dilapan-S for cervical ripening. Recruitment of approximately 200 patients is planned. The primary outcome will be the percentage of patients with vaginal delivery. A satisfaction survey will be also obtained after the preinduction period. The clinical trial involves also assessing the costs of the above methods.

Discussion: Currently, up to 40% of pregnant women undergo preinduction of labour. The most commonly used methods of preinduction of labour to date – mechanical dilation with Foley catheter, and prostaglandin administration - are both associated with certain risks of maternal and fetal adverse events, while insertion of Foley catheter might in certain percentage of patients be technicallly difficult or impossible. Prior foreign studies have shown similar or higher efficacy and safety and improved maternal satisfactoriness of preinduction with Dilapan-S.

Conclusion: We believe that in line with available literature that our results will confirm that Dilapan-S appears to be safe, cost-neutral and reduce staff workload in comparison to dinoprostone, including higher efficacy and better patient satisfaction.

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Home ctg remote care in high-risk pregnancy

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Introduction: High-risk pregnancies account for about 20% of all pregnancies and are routinely referred for hospitalization or a daily CTG examination performed on an outpatient basis. Unnecessary stress, the risks associated with traveling to hospital and waiting in queues are just a few of the factors that put the patient herself at risk. The costs associated with the patient's hospitalization or extended waiting time for outpatient CTG examinations are a burden on the healthcare system.

The CTG method is the most widely used diagnostic procedure for monitoring foetal well-being. The classic cardiotocography monitor is

a stationary system used in medical facilities. Pregnabit Pro makes it possible to perform the same examination by the patient at home.

The measurement performed during the test does not require the Patient doesn't require any special training. It is a painless, non-invasive procedure, harmless to the Patient and the foetus.

Purpose: The purpose of the study was to test the new medical device Pregnabit Pro for remote care and proving that home teleCTG is a sufficient method for supervising high-risk pregnancies, specifically with disorders such as: PGDM, GDM, hypertension and FGR.

Method: The study evaluates 30 women who performed remote examinations 1-2 times a day for 30 minutes each, from 32 weeks of pregnancy to term. The examinations were evaluated by 3 independent midwives. Stationary CTG examination made once a week, evaluated by a physician. Interpretation of the CTG signal was performed using a protocol defining the successive stages of foetal well-being assessment.

Discussion: Remote CTG examinations enable continuous supervising of high-risk pregnancies. The effectiveness of this method enables the widespread use of the Pregnabit Pro system, for increasing the level of supervision in case of the high-risk pregnancies.

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Cornual ectopic pregnancy -Case report

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Cornual ectopic pregnancy is one of the most rare examples of ectopic pregnancy, leading to health and life threatening complications. Cornual pregnancy constitutes 1-2.5% of all ectopic pregnancies. The mortality ratio related to it is 2% and mainly results from a massive hemorrhage.

It is due to rich vascularization of the implantion site. Thus, this qualifies as high-risk pathology in pregnancy and requires full attention. Among symptoms women claim: lack of menstruation, irregular vaginal bleeding and abdominal pain. The physical exam is usually non-specific, with increased pain on palpation of abdomen and reproductive tract oragns, Bloomberg sign may be found and in speculum examination bleeding is found. Free BetaHCG and pelvic ultrasound is of high importance in the differential diagnosis.

The aim of the study was to present diagnostic and therapeutic steps in the menagement of patient with cornual pregnancy.

35 yo multipara, after 4 c-sections, was admitted due to pain in the right quadrants lasting for 1.5 hour and vomitting. LMP was 8 weeks earlier. On admission patient was stable, BP 110/78, HR 68/ min, sat O2 97%, Glasgow 15, RTS 12 points, NRS 5 points. Onn physical: peritoneal signs positive, abdomen painful on palpation in area of right adnexa, heavy vaginal bleeding. In transvaginal ultrasound: uterine cavity empty, in the area of right adenxa present gestational sac with living fetus- heart beat 166/min, free fluid in pouch of Douglas, myoma uteri measuring 28mm.

During the surgery the following were found: 500ml of blood in pelvis, right cornua enlarged (around 10 cm), bleeding, in the anterior wall myoma measuring around 1.5cm, adnexa without pathology. During the operation the cornual pregnancy was removed with righ cornua and righ salpingix. Hemostatis was acheived with interrupted sutures. D/C was performed. Drainage was kept from the abdominal cavity. The postoperative management included: 3 blood packages, 2 plasma packages, 20 iu. Oxytocin, ceftazidim and fluids (Ringer). Patient was discharged after six days in good condition.

Cornual pregnancy is rare complication of ectopic pregnancy. However, due to important risk of life-threatening complications it should always be taken into consideration.

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Postpartum blues prevalence in polish population - Pilot study

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Introduction and objectives: Postpartum blues (PB) is a phenomenon which occurs in first days after delivery and can affect more than a half of postpartum patients. This condition is a mild and transient disorder which is characterised by mood lability, crying, anxiety, fatigue, negative thinking, somnolence, and depressed mood. Etiology is multifactoral and consists of social, psychological, hormonal and organizational factors. The objective of this study was to assess the prevalence of postpartum blues in polish population, measure the average duration time of this condition, and reveal the most important risk factors of prolonged mood disorders.

Methods: In our study we examined 128 patients so far using the author questionnaire in which we asked about the presence of 15 most common symptoms of mood disorder and its most common risk factors. The poll was conducted directly after delivery and then 7, 14 and 42 days later. In presence of more than 4 symptoms the diagnose of PB was made and the further observation was implemented. We also checked which risk factors were most commonly connected with the diagnosis of PB.

Results/discussion: The prevalence rate of PB in the early puerperium (until 7 days postpartum) was 24% and 12% 14 days postpartum. In 4% it lasted till 42 day postpartum, what obliged us to diagnose postpartum depression and direct patients to mental health specialist. Most common risk factors of PB were: gestational diabetes mellitus, primiparity, emergency caesarean section, high level of pain during labor and low level of social support. According to literature data the prevalence rate of PB vary from 4 to 80%, so more precise assessment is essential.

Conclusions: Postpartum blues is a common condition in postpartum patients and it requires careful observation in order to provide adequate support and early detection of more serious disorders. Further studies are needed.

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Opportunistic HPV test outcomes

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Human papillomavirus vaccination is not in the vaccination programme in Turkey. The 9-valent HPV vaccine just started in January

2023 and is not covered by the government, while all other vaccines are. Pap-smear and HPV co-tests are routinely done by the family medicine and opportunistic tests are done by the gynecologists. We wanted to check rates of opportunistic HPV tests that were collected in our private Safa hospital, results of these tests, and if patients were vaccinated before or after this testing in the past five years.

In total, 91338 patients visited our hospital between 2018 and 2023. From those, only 354 patients were tested for HPV and 108 came with a positive result and additional genotype testing was done. A wide range of variety was noticed in this small population. HPV type 6 was the most common with 16 patients followed by 7 positive patients of type 16 and type 11. Type 18, 26, 31, 33, 35, 39, 42, 45, 52, 53, 54 58, 59, 61, 66, 68, 70 73, 84 were found to be positive in these results. All high risk patients went under colposcopy. LEEP excision was done for 9 of these patients and conization for 2 patients. One patient had concommitten HIV positivity and another was diagnosed with thyroid carcinoma in their follow ups.

We believe that the rate of HPV positivity is very high in opportunistic testing because patients with symptoms tend to consult gynecology for hpv testing rather than their family medicine. None of these patients were vaccinated before the results and only few of them got vaccinated afterwards even though all patients are recommended to get vaccinated by their gynecologists in our hospital. We believe that HPV vaccination should be included in the vaccination programme as soon as possible to decrease the burden of cervical cancer.

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Labor induction in premature rupture of membranes with the use of dinoprostone administered vaginally

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Premature rupture of membranes in term pregnancies with no subsequent uterine remains a substantial risk for the mother and the fetus, and later the neonate. In cases of prolonged amniotic fluid outflow, labor induction is recommended. The most problematic is the situation of low cervical rippening, with Bishop score of less than 6 points. In this study, 81 labors were analysed, where premature rupture of membranes was observed and Bishop score of less than 6 points was assesed in gynecological examination, and the method for labor induction was dinoprostone insert administered vaginally. The patients were in term pregnancies, with no other complications or health problems of importance. Mean birth weight of the neonates was 3293g, and in 98% (n = 80) of cases they received Apgar score of 8 or higher. Only one neonate was assessed with 6 Apgar points. The labor induction resulted in vaginal birth in 53 cases (65%), and vaginal birth assisted by vacuum extractor in 7 cases (8%). Only 26% (n = 21) of patients had to have a cesarean section performed, mainly due to unsuccessful labor induction or the risk of intrauterine infection of the fetus. This shows that dinoprostone insert administered vaginally is a safe and effective way of managing term pregnancy complicated by premature rupture of membranes, with low cervical rippening of less than 6 Bishop points.

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Point of care ultrasound in obstetrics and gynaecology: hope or hype?

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Introduction and aims of study: Point-of-care ultrasound (POCUS) is a rapidly growing field in obstetrics and gynaecology, with increasing evidence supporting its use in both diagnostic and procedural settings.

Methods: The search for relevant literature was conducted using the MeSH terms “point of care ultrasound”, “obstetrics” and “gynaecology” via the University of Malta’s HyDI Search Engine in the last 7 years (2014 to 2022).

Results and Discussion: In the initial screening of 71 search results, there were 6 duplicate entries and 27 were removed from the analysis, either because they were commercial reports or not directly related to obstetrics and gynaecology. This process resulted in a final set of 38 publications with thematic analysis into: Maternal Health (2), Medical Education (9), Case Studies (17), Artificial Intelligence Techniques (1), Obstetric Anaesthesia (3) and the use of POCUS in Low-Resource Settings (6). Only 1 of these 38 publications was a systematic review.

One of the major advantages of POCUS is its accessibility, making it particularly useful in resource-limited settings, where access to specialized imaging and financial resources are constrained. The literature suggests that POCUS is a valuable tool in obstetrics and gynaecology, with a growing body of evidence supporting its use in a variety of case studies. However, it is important for healthcare providers to be aware of the limitations of POCUS including incidental findings and suggests its use in conjunction with other imaging modalities, as appropriate.

Further research is needed to better understand the optimal utilization of POCUS in obstetrics and gynaecology, and to develop standardized protocols and training programs to ensure consistent and accurate results.

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Covid-19 pregnancy & maternal outcome

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COVID-19 PreMatOut (COVID-19 Pregnancy & Maternal Outcome) initiative was established in Slovakia after the declaration of the global pandemic. Research part of the project consists of data collection and subsequent analyses of various subcategories. Nationwide study cohort contains women who tested positive for the presence of SARS-CoV-2 at any time during pregnancy.

The primary scope of the research monitors prevalence of SARS-CoV-2 in pregnant population: after case identification, analyses the course and consequences of the infection on pregnancy, childbirth, puerperium, breastfeeding, occurrence/frequency of obstetric and non-obstetric complications and conditions of neonates during their in-hospital stay. COVID-19 PreMatOut initiative also incorporates website www.-covid19atehotnost.sk, which beside being a digital data collection platform (of prenatal out-patient care and any in-hospital care) serves as information source on the topic for both healthcare professionals and the general public.

Secondarily, further analysis is ongoing for differentiating severity of symptoms of the infection due its timing within pregnancy as well as its relation to pre-existing conditions/comorbidities of affected women, pharmacological & supportive treatment options, their efficacy, development, and accessibility within the timeline of pandemic, impact of infection/disease and pandemic itself on mental health and psycho-social wellbeing of respondents. Datasets gained from the project are also used in CONSIGN (Covid-19 infectiOn aNd medicineS In pregnancy) study by European Medicines Agency.

Pregnant women who tested positive for SARS-CoV-2 since the first confirmed case till the end of 2022 based on records of the National Public Health Office were approached as well as their primary care gynaecologists and facilities where they were treated/delivered. Presented are first analytical outcomes: the impact of the SARS-CoV-2 infection on pregnancy including symptomatology/severity of the disease in pregnant subpopulation, the commonest complications in pregnancy and childbirth and evaluation of therapeutic strategies & their success rate as well as their re-evaluation over the time.

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Vulvar lichen sclerosus – Innovative hifu treatment

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Introduction and aim: Vulvar lichen sclerosus is a chronic inflammatory disease of the skin and mucous membranes of the vulva. Clinical symptoms include whitening of the skin of the vulva, burning, itching, cracking of the skin. It can also be burning and itching without skin changes. The aim of the study was to evaluate the effectiveness of the HIFU method in the treatment in a patient with VLS.

Methods: A 36-year-old female patient presented with symptoms of burning and itching of the vulvar skin. Clippings were taken to histopatological examination, the result was lichen sclerosus. The patient was qualified for HIFU treatment of the vulva. Treatment parameters were used: cartridge DL 3.0 mm, angle 3, length 5-25mm, pitch 1,5, power 0,3-0,6J. The procedure is performed on the labia moistened with gel, the emitter from the DL-3.0mm cartridge is applied to the tissue. After the shot, it moves by about 1.5 mm without tearing the cartridge emitter from the lip (thus preventing air from entering). The lip should be slightly stretched to carefully develop its entire internal structure.

Results: The patient's symptoms disappeared after one procedure. She underwent a series of 4 treatments with an interval of 4 weeks, with a recommendation to perform booster treatments in case of recurrence of symptoms. During the 18-month follow-up, symptoms did not recur. The evaluation of the treatment was performed by a qualified and experienced gynecologist and confirmed in histopathological examination.

Conclusions: HIFU is a painless and non-invasive method of treating lichen sclerosus, which gives positive results in patients with troublesome symptoms and difficulties in treatment.

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Differences in newborn status between those born from mothers with active covid-19 infection and those born from mothers who underwent covid-19 infection in first trimester of pregnancy - Pilot study

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Introduction and Aim of study: COVID-19 remains the constant threat to a public health condition since 2020. The impact of COVID-19 infection on newborn status at delivery is still questionable. We compare in this pilot study newborns born from mother with currently active COVID-19 infection with those born from mothers who underwent COVID-19 infection at the first trimester of pregnancy.

Methods: We randomly chose 24 patients hospitalized between 04.2020 and 01.2023 at the Department of Gynecology, Obstetrics and Oncological Gynecology, Medical University of Silesia, Bytom, Poland. The inclusion criteria were: documented COVID-19 infection on admission (based on ICD-10 code (U07)), positive test result for COVID-19 in the national system for COVID-19 confirmation in pregnancy, women admitted for labor (vaginal delivery or c-section) regardless of age. The inclusion criteria: lack of proper medical documentation for mother and newborn.

Results: We included 24 women in the pilot study aged 17- 39 years old with 15 of the during active COVID-19 infection (group 1) and 9 women with COVID-19 infection at the first trimester of pregnancy (group 2). 14 of 15 patients in group 1 delivered at term (38-40). 1 patient in group 1 delivered at 24 weeks of gestation due to placental abruption. In group 2 all women delivered between 37-39 weeks of gestation. Newborn median birth weight was 3440g (600-3840g) in group 1 and 3400g (2370-4160g) in group 2. Apgar was 10 in both 3 min and 5 min. in 23 newborns except one – was 8 and 9.

Conclusion: We have not found differences between newborn born from mothers with active COVID-19 infection and those born from mother who had COVID-19 infection at the first trimester. However, larger, multisite studies are required to confirm this preliminary finding.

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An update on maternal and neonatal outcome after vaginal breech delivery at term after cesarean section – a prospective cohort study of the Frankfurt breech at term cohort (frabat)

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Introduction and aims of the study: Cesarean sections cause long- and short-term complications for women and children. Despite this fact and missing empirical evidence, most women with a breech at term and a prior cesarean section are offered a cesarean section. To underline our findings of a safe vaginal delivery for women with a prior cesarean section and a breech at term when selected due to stringent criteria with a greater number of patients, we extended our findings by the following four years.

Methods: We included 958 women who intended a vaginal singleton breech delivery at term between January 2006 and December 2020 in this monocenter cohort study. We compared the neonatal and maternal outcomes as well as the mode of delivery of intended vaginal breech deliveries of women with a prior cesarean section to primiparous women.

Results: Out of 526 women who had a vaginal breech delivery, 36 women had a prior cesarean section (6,8%). Comparing the neonatal and maternal morbidity and mortality, we could not find a significant difference in successful vaginal deliveries of women with a prior cesarean section compared to primiparous patients.

Conclusions: Extending the study by the following four years, we could underline that a prior cesarean section is not an exclusion criterion for a vaginal breech delivery. Women with a prior cesarean section and a breech at term should be offered counseling about the delivery options.

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A useless alternative to recurrent cuff prolapse: Sacrocolpopexy with prolene suture

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Introduction: Pelvic organ prolapse is defined the herniation of the pelvic organs.Prevalence of POP according to epidemiological studies,3% to 50%,there are conservative and surgical treatment options.

In this case,we aimed to describe the non-mesh antiprolapse surgery method that we performed on our patient who had undergone antiprolapse surgery twice before.

Case: A 52-year-old women,who had three vaginal delivery,was applied the gynecology clinic 5 years ago.She was diagnosed with stage IV pelvic organ prolapse,Vaginal hysterectomy and sacrospinous fixation was performed.After 2 years,she was applied the gynecology clinic again.Laparoscopic lateral suspension using mesh was performed.She came again 3 years later.She was diagnosed with stageIV pelvic organ prolapse,we decided to perform surgery.The laparoscopy procesure was performed according to the current guidelines.We made the whole mesh visible by following its trace.The bladder is mobilized off,we opened the retroperitoneum and identified the ureter trace,also rectum mobilized.Nonabsorbable mesh,which had been applied before was removed.We performed repairment of midline defect(anterior colporrhaphy) laparoscopically.The wedge of anterior vaginal cuff was excisied triangle shaped.Than was performed posterior colporrhaphy laparoscopically.After these procedures,anterior longutidinal ligament visialized.Dissection was continued lateral side of sacrouterine ligament to vaginal vault.Anterior longutidinal ligament was sutured along the whole length of sacrouterine ligament with 1-0 proline.After the operation, it was observed that vault was pulled quite upwards.

Conclusion: It isn't clear to decide an optimal prolapse surgery,especially in recurrrent prolapse.Surgical repair without mesh provide us natural and anatomic prolapse surgery,and prevent complication of mesh.Based on all these opinions,we performed sacrocolpopexy operation with prolone suture,we used patients own sacrouterine ligament as a guide.We didn't use nonabsorbable mesh, also we removed mesh which has been applied before,We discharged the patient after operation.In order to observe the long-term results,we called the patient for examination at the 1st and 6th months postoperatively.

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Antenatal corticosteroids - The art of high-risk pregnancies selection

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Background: Premature delivery is still one of the main causes of neonatal morbidity and mortality. Timely implementation of antenatal corticosteroids (ACS) for patients at high-risk of preterm delivery reduces the chance of prematurity complications. The greatest benefits are observed within 7-14 days from the ACS administration. However, implementation of corticosteroids to a patient who does not deliver within this period could be associated with numerous consequences for the mother and fetus. The aim of the study is to estimate whether gravidas were properly qualified for ACS treatment defined as proportion of women that delivered prematurely within 14 days from administration.

Methods: A retrospective study conducted at the Department of Perinatology of Medical University of Lodz Poland. The study analyzed 146 cases of ACS administration among patients in the period from January 2021 to July 2022. Data was reviewed in terms of comorbidities, obstetric history, indications for ACS, implication of tocolytics, cervical pessary or cerclage application, vaginal progesterone intake and time from administration of steroids to delivery as well as selected neonatal outcomes.

Results: Only 35,6% of patients delivered within 14 days from ACS administration. The main indication was risk of premature delivery (uterine contractions) (47,2%), short cervical length (25,3%) and preterm premature rupture of membranes (13%). Although, if we analyze the group that delivered within 14 days from corticosteroids treatment it includes: 18 out of 19 women diagnosed with pPROM (94,7%), 21 out of 69 patients with risk of premature delivery (30%), and 5 out of 37 patients where indication was short cervical length (13%).

Conclusions: The majority of patients after ACS intake do not deliver in the optimal period from the administration of treatment. Before implementing ACS, it is necessary to select patients with a real risk of premature delivery.

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The short-term effects of re-approximation of the rectus muscle at caesarean delivery - a pilot study

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Objective: The aim of this study is to assess the effect of re-approximation of the rectus muscle on short-term effects of caesarean section in women undergoing primary caesarean delivery (CD).

Materials and Methods: This was a retrospective study including 61 women among whom 30 had undergone re-approximation of the rectus muscle, whereas in the remaining group of the subjects that procedure had been omitted during caesarean section closure. The following data were evaluated: length of hospitalization, laboratory tests results, postoperative pain assessed using the visual analogue scale (VAS), number of doses and type of postoperative analgesia.

Results: Apart from the length of hospitalization, no significant differences were found in the data reviewed.

Conclusion: There were no statistically significant differences in the examined parameters between the studied groups. The decision to re-approximate rectus muscle is still up to the operator.

Keywords: Caesarean section; caesarean delivery; pain; rectus re-approximation; rectus closure.

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The Covid-19 Pandemic Restrictions and Its Impact on Surgical Treatment of Male Infertility Due To Spermatic Cord Varices – A Single Academic Medical Center Experience

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Introduction and aims of the study: Because of the coronavirus disease 2019 (COVID-19) pandemic, Poland like many other European countries has implemented significant restrictions in every area of life, including health care, which in many areas had to be limited to treating patients with oncological or life-threatening diseases, moving the treatment of non-essential diseases into a further unknown future. The aim of study is to analyze the impact of COVID-19 restrictions on male infertility treatment caused by varicocele in Public Healthcare System.

Material and Methods: A total of 188 patients qualified for laparoscopic varicocelectomy in COVID-19 pandemic and pre-pandemic time (2019-2020).

Results: The analysis showed a nearly eight times decrease in varicocelectomies performed in the COVID-19 pandemic year and period as compared to the year and the period before the pandemic.

Conclusions: In our opinion COVID-19 restrictions had a very serious impact on regular hospitalizations and because of that male infertility treatment due to spermatic cord varices was significantly decreased.

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Evaluation of the therapeutic effectiveness of a 6-point vaginal mesh in the treatment of high degree pelvic organ prolapse

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Introduction: The study aimed to assess the recurrence rate of pelvic organ prolapse in females who underwent a 6 -point Ingynious anterior mesh implementation and to identify potential differences between POPQ grade III and IV in terms of treatment effectiveness and selected patient characteristics. Patient characteristics included age, BMI and parity. The number of prolapse recurrences, complications, stress urinary incontinence and overactive bladder *de novo* in the follow-up was analysed. Recurrence included diagnosis of POPQ stage II or higher of the apical or anterior compartment. The statistical analysis involved frequency tables with percentage values, diagrams, and a parametric t-Student test (for independent variables).

Results: The recurrence rate was 15,29%, including 13 out of 85 investigated cases. All patients in the research underwent natural labour. No statistical difference was observed between the number of natural births and the recurrence rate of prolapse ($p > 0.05$). The recurrence rate was higher in POPQIV- 29,2% than in POPQIII– 9,8% ($p < 0.05$). Only 17 (20%) patients had normal body mass and 68 (80%) were overweight or obese. 11 out of 13 (84.6%) patients with recurrence were overweight or obese yet the sample size was too small in subgroups for estimating statistical significance. The rate of postoperative complications was 9.4% (8 patients). The general follow-up of the study was 2 to 60 months, whereas follow-up until recurrence equalled 1 to 48 months with a median value of 6 months.

Conclusions: In this retrospective study, the investigated recurrence rate was low. All patients included in the study underwent at least one natural labour, though there was no significant difference between the number of labours, POPQ stage or BMI and the recurrence rate.

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Changing Trends in Caesarean Section rate in Ireland [StQuote] s four largest maternity Hospitals 2016-2020: Which groups account for the rising Caesarian rate?

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Background: Caesarean section rates have risen in Ireland over the last 15 years. Despite this, rates of perinatal mortality have increased since 2018 The Robson Ten Group system has been developed in the National Maternity Hospital to audit the Caesarean rate.

Methods: Robson Ten Group data were compiled from Ireland's four largest maternity hospitals from 2016 to 2020 to evaluate which groups contributed most to this rising rate. The trends were then analysed using linear regression for statistical significance.

Results: The overall Caesarean rate in the ten groups showed no significant change. Instead, the increasing rate can be accounted for by the groups that mothers now fall into. In term cephalic nulliparous patients, there was a clear trend toward pre-labour caesarean section or induction of labour. It cannot be identified from this study if the changes are driven by pre-labour caesarean section or induction of labour.

Conclusions: Increasing ates of caesarean section are being driven by the increasing proportion of patients in the Robson 2 and 5 groups without a reduction in the caesarean section rates within these groups. In the Robson 2 group it is not clear if this trend is due to pre-labour caesareans or increasing rates of induction of labour. Further research is needed to identify the reasons for increasing rates of intervention in term cephalic nulliparous patients (robson1/2).

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Im portance of condom use in cervical cancer prevention

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Introduction: The protective role of condoms in the prevention of human papillomavirus (HPV) infection and precancerous and cancerous changes on the cervix has not been well studied in the past and is therefore a matter of frequent controversy. More and more research shows that condom use could play an important role in preventing HPV infection, precancerous and cancerous lesions of cervix.

Discussion: Regular and consistent condom use can significantly reduce the risk of HPV infection in women and men, although protection is not complete. In addition, it reduces the possibility of cervical intraepithelial neoplasia (CIN) and invasive cervical cancer. Condom use increases the chance of spontaneous regression of CIN and clearance of HPV infection. It also reduces the likelihood of CIN recurrence and persistent HPV infection after CIN treatment.

The protective action of the condom can be explained in several ways. It prevents direct contact between the infected and healthy mucosa or skin and thus the transmission of virus. It also prevents contact of seminal fluid with the cervix, as research shows that seminal fluid could enhance tumorigenesis through immunosuppression and induction of angiogenesis in contact with cervical epithelial cells.

Conclusion: Condoms play an important role in preventing HPV infection and cervical cancer. Research has shown the benefit of condoms both in primary prevention together with vaccination, as well as in secondary prevention, after confirmed HPV infection or even after the appearance of CIN. Knowledge about HPV transmission also influences the decision to use a condom, so age-appropriate and correct sex education is very important. Vaccination against HPV should therefore also be accompanied by education about safe sex. Condom use should also be encouraged by gynecologists in individual counseling as an additional aid in the regression of low-grade lesions and after treatment of high-grade lesions.

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Application of outpatient hysteroscopy in covid-19

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Introduction: COVID-19 pandemic was a major challenge to health systems to provide appropriate care for patients and at the same time minimize the risk of SARS-CoV-2 infection of healthcare professionals and patients. The aim of the study was to analyze the outpatient (office) hysteroscopy procedures performed during COVID-19 pandemic in The Institute of Mother and Child, Warsaw, Poland.

Materials and methods: The study group consisted of 345 women scheduled for the office hysteroscopy in The Institute of Mother and Child, Warsaw, Poland from April to December 2020. Three hundred eight women attended the procedure and all were tested towards SARS-CO-V-2 with real-time PCR test 48 hours before admission. Remaining 37 women did not report for testing.

Results: Twelve patients of 308 showed abnormal results of RT-PCR SARS-CoV-2 testing: 3 positive and 9 inconclusive. All patients with positive and 3 with inconclusive results refused repeated testing; in remaining 6 patients repeated testing showed negative result. The total of 302 SARS-CoV-2-negative women underwent office hysteroscopy and in 5 (1.6%) patients endometrial cancer was found.

Conclusions: Office hysteroscopy with universal RT-PCR testing towards SARS-CoV-2 was an effective diagnostic procedure for women with abnormal symptoms related to the intrauterine pathology during COVID-19 pandemic.

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Pelvic organ prolapse occurance in women in 3rd trimester of pregnancy

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Background: Pelvic organ prolapse (POP) and other functional changes are the problem of the pregnant women. Problem of the POP occurs in about half of the pregnant women in the reproductive age

and urinary incontinence (UI) refers to 10% of women in a well-developed countries. Purpose of the study was to specify type of the problem including urinary incontinence (UI), POP or fecal incontinence that postpartum women struggling with.

Methods: Pregnant women in age 20-40 years old in 3rd trimester of pregnancy, hospitalized in University Hospital in Cracow were asked to complete the questionnaire ICIW-LUTSqol and original questionnaire including questions regarding urogynecological and obstetric problems and symptoms. Obtained data has been collected in a database. the statistical processing of the data was carried out using the appropriate program.

Results: 100 patients filled out correctly validated forms, which were then analyzed by the research team. The mean age of pregnant women in the study was 31 years and the mean gestational age was 35 weeks of gestation. One third of women reported a problem with UI and only 3 of them reported visit the urogynecologist during pregnancy. Among the patients who reported discomfort, half of them experienced onset of UI problem during the time of pregnancy. One third of patients encountered the problem during pregnancy and 12% of them before pregnancy. The symptoms most often occurred during sneezing, laughing and coughing. Three pregnant women (9%) experienced UI while walking, and 15% on the way to the toilet. None of the surveyed patients reported fecal incontinence or pelvic organ prolapse.

Conclusions: Pregnancy is a significant risk factor of developing urinary incontinence. Incontinence seems to be associated with number of deliveries, type of delivery and patient age.

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Mental health of pregnant sars-cov-2 positive women during global pandemic

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Attention should be paid to the impact of the global pandemic of COVID-19 on maternal mental health. Life situations change entirely with pregnancy in so many ways and in the terms of these changes and over the top with COVID-19 global pandemic, pregnant women became significantly more vulnerable. Pregnancy itself poses potential risk of development of mental health issues. Already published research concludes that around 20-30% of pregnant women did suffer from some form of mental health issue; from mild to severe psychiatric problems during the COVID-19 pandemic.

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COVID-19 PreMatOut (COVID-19 Pregnancy & Maternal Outcome) initiative in Slovakia found a platform for wide variety of researches upon the impact of SARS-CoV-2 infection in pregnancy and study oriented on mental health and psycho-social well-being those affected is one from core branches of scientific part of this initiative.

Based on the records of the National Public Health Office in total 915 women were approached fulfilling set inclusion criteria: time span of COVID-19 global pandemic, tested positive for a SARS-CoV-2 infection at any point during their pregnancy. After obtaining informed consent, each respondent was given a questionnaire set divided into 3 categories: assessment at the time of infection, one month after delivery and one year after delivery. Evaluation of mental well-being was performed using the EPDS (Edinburgh Postnatal Depression Scale), other visual scales and open questions. Respondents / their physicians also provided beside demographics detailed information on obstetric and general medical history, the course of the infection and the current pregnancy itself.

Aims of ongoing analyses are to sufficiently demask relation of not only SARS-CoV-2 infection but also other attributes of global pandemic on maternal mental health.

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Postpartum Dyspareunia

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Introduction and aims of the study: Dyspareunia is a common but poorly understood problem affecting around 7.5% of sexually active women. It is a symptom that can have a significant impact on women's health, relationships and quality of life. Dyspareunia is defined as recurrent or persistent genital pain associated with sexual intercourse. In the early 20th century, under the influence of the psychoanalytic movement, dyspareunia was considered a "hysterical" symptom. Nowadays it is known that the aetiology of dyspareunia can be primarily physical or primarily psychosexual, often with considerable overlap. Based on recent meta-analysis, the overall estimated prevalence of postpartum dyspareunia was 35%. Several surveys to date revealed that only 7-15% of women who had a postnatal sexual problem reported discussing it with physician. The issue is of great importance, so health professionals need to have enough expertise in advising women about potential changes to sexual health after birth. The aim of our study is to provide an overview of postpartum dyspareunia including the prevalence, risk factors and management possibilities.

Methods: We conducted a literature search using PubMed database and reviewed the selected data.

Results and discussion: In the literature, physical and psychological factors such as age, parity, mode of delivery, epidural analgesia, obstetric perineal tears, episiotomy, breastfeeding, postnatal depression, and relationship satisfaction have been examined in association with postpartum female sexual dysfunction. The rate of C-section has been increasing in recent decades, importantly, it has been suggested that C-section maintains sexual wellbeing compared with vaginal delivery. However, the literature is inconsistent regarding the connection between the mode of delivery and postpartum sexual dysfunction. Most studies agree that obstetric perineal trauma, rather than mode of birth, increases the odds for postnatal dyspareunia. Healthcare providers should advise women antenatally about the use of lubrication to reduce the vaginal dryness that might accompany the hypoestrogenic state of breastfeeding.

Conclusion: Given the high prevalence and its impact on a woman's quality of life, special attention should be paid to dyspareunia during the postpartum period.

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Heart failure caused by drug abuse – case report of a pregnant woman with lvef < 25%

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Pregnancy is associated with substantial hemodynamic changes. Left ventricular ejection fraction (LVEF) is the volumetric fraction of blood pumped out of the heart with each contraction of the left ventricle. It reflects heart's efficiency. Damage to myocardium compromises the heart's performance as an efficient pump and may reduce ejection fraction. According to the European Society of Cardiology guidelines normal LVEF exceeds 50%.

31-year-old-patient was admitted to Department of Obstetrics and Gynecology, Bielanski Hospital at 25 weeks of second pregnancy due to heart failure and LVEF 25%. She also suffered from hypertension, depression and gestational diabetes mellitus. The patient was addicted to nicotine and amfetamine in the past. The drug abuse was the probable reason of heart failure in that case. During hospitalization gradual decrease of LVEF to 21% without any clinical symptoms we observed. The patient was treated with beta-adrenergic drugs and loop diuretics. At 36 weeks due to polyhydramnios cesarean section was performed. Baby girl weighting 2950g in general good condition was born. C-section and anesthesia were uncomplicated. The patient was observed for 24 hours in Intensive Unit Care. She did not present exacerbation of heart failure. 6 days after delivery the control echocardiography was performed and was comparable to the examinations performed during pregnancy, the LVEF was 23%. The patient was discharged 7 days after delivery in good general condition with small doses of beta-adrenergic drugs and ACEI.

Heart failure is a serious condition but if the patient is adopted and stable, the uneventful course of pregnancy and delivery is possible.

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Rate of exclusive breastfeeding at discharge in latvia through years of covid-19 pandemic and associated sociodemographic and in-hospital factors: Results from the imagine euro study

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Introduction and aims of the study: Exclusive breastfeeding (EBF) is the ideal nourishment for infants. WHO recommends initiation of breastfeeding within the first hour of birth and EBF for the first 6 months of life due to its benefits both for the mother and infant, therefore breastfeeding support in facilities is crucial. The aim of this study is to compare the rate of self-reported EBF at facility discharge through the first years of COVID-19 pandemic and associated factors women faced in healthcare institutions.

Methods: This was a cross-sectional study, conducted among women who gave birth in facilities over the first years of COVID-19 pandemic (March 2020 – October 2022). Women answered an online validated questionnaire that included 40 WHO standard-based Quality Measures, which included questions about breastfeeding experiences. Descriptive and multivariate logistic regression analyses were performed to compare breastfeeding practices in different pandemic years.

Results: Total 2770 answers were analysed, of those 73.4% (n = 2043) women reported EBF at discharge. EBF rates increased during the pan-

demic (71.3% in 2020, 74.4% in 2021, 75.0% in 2022), without statistical significance. Multiparous (n = 1184, 42.7%) were more likely to breastfeed exclusively compared to primiparous (adjOR 1.59, 95%CI 1.3-1.95; p < 0.001). Women having Cesarean section (CS) were less likely to breastfeed exclusively (adjOR 0.52, 95%CI 0.41-0.66, p < 0.001). Women with high school education were less likely to breastfeed exclusively compared to mothers with university degree (adjOR 0.72, 95%CI 0.54-0.94, p < 0.05). Lack of breastfeeding support from healthcare workers was reported by 31.9% women and those women were less likely to breastfeed exclusively (adjOR 0.4, 95%CI 0.33-0.49; p < 0.001).

Conclusions: EBF rate has increased during pandemic in Latvia, however women report need for more support from healthcare workers. Findings indicate that primiparous and women who gave birth by CS should be given special attention and support to favour EBF at discharge.

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An Intrauterine Adhesion Causes the Fetal Head Stuck and Death

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Introduction and aims of the study: Intrauterine adhesion (IUA) is a post-pregnancy condition that can cause early miscarriage subsequent pregnancies. We aimed to report a woman with IUA presenting with a fetal head stuck in the uterus and died of it.

Methods: A case report study of a miscarriage caused by IUA. We filmed videos to record the ultrasound and the hysteroscopic procedure to confirm the cause of early miscarriage in a multiparous at an advanced age.

Result and/or discussion: We applied the nuchal translucency scan to identify the fetal head stuck in the adhesive uterus. This eventually leads to pregnancy loss in a few days. We investigated fetal/maternal causes and excluded immune, infective, thrombotic, endocrinological and fetal chromosomal causes. The diagnosis of IUA was eventually made with a combination of antenatal ultrasound and diagnostic hysteroscopy at follow-up. IUA is not uncommon following a miscarriage, and it can cause adverse outcomes in subsequent pregnancies. Despite having intrauterine adhesion, the woman had no problems with her menses and hence was not offered transvaginal ultrasound before conception. This leads to missed diagnosis and delayed pre-conceptional treatment.

Conclusions: We advocate an ultrasound scan to screen the uterine cavity before preparing for conception for women who have multiple miscarriages even without any symptoms.

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The use of hysteroscopic metroplasty with diode laser to increase endometrial volume in women with septate uterus: our experience

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Objectives: The aim of our study was to assess the feasibility, safety and efficacy of office hysteroscopic metroplasty using a dual-wavelength (980nm and 1470nm) diode laser system and to evaluate with 3D ultrasound endometrial volume before and after procedure in women with septate uterus (class U2A)

Material and methods: 25 consecutive patients with septate uterus where scheduled for office hysteroscopic metroplasty with diode laser between January 2020 and January 2022. Endometrial volume was evaluated before and 3 months after surgery using 3D transvaginal ultrasound. The surgical procedure was performed with 4 mm hysteroscope with vaginoscopic approach in an office setting, with no anesthesia nor sedation. We used a Dual wavelengths Laser System (Leonardo®, Biolitec® DUAL 45). This laser is characterized by combination of two wavelengths (980 nm and 1470 nm), giving contemporary capacity of cutting and vaporization.

After three months from the procedures, it was performed a second hysteroscopic look (to evaluate residual septa or the presence of adhesions) and another 3D ultrasound one weed after ovulation in order to evaluate the endometrial volume.

Results: The surgical procedure consisted in the complete vaporization and removal of the septum. Patients were all discharged a few hours after the procedure with no early complications.

The median increase of endometrial volume before and after surgery was 2 cm^3. At the moment of the current study, a 12 months follow up has been performed in all the patients. None of the patients have has reported any adverse effect.

Conclusions: Office hysteroscopic metroplasty with diode laser is a safe procedure and has preliminary showed to increase endometrial volume. The increase in endometrial volume by 3D-TV US could be used as a prognostic factor for the reproductive outcomes.

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Sonographic examination in breech delivery predicts birth outcome – A prospective blinded study

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Introduction and aims: In order to spread competence in vaginal breech deliveries it is necessary to develop new tools for birth progression and safety evaluation. In deliveries out of breech presentation, an established ultrasound examination is still missing. We determined the position of the fetal buttocks in relation to the maternal pelvic inlet using intrapartum ultrasound. In order to verify accuracy, we evaluated results in comparison to the clinical vaginal examination. The predictive value of our examinations on birth outcome parameters such as cesarean section rate, as well as fetal and maternal outcome parameters was analyzed.

Methods: We performed a prospective blinded study on 106 mothers with vaginally intended breech delivery. At beginning of stage two in labor, the descent of the fetal buttocks into the mother's pelvic inlet was detected with transabdominal ultrasound and vaginal examination by different observers (blinded). For non-parametric values, Wilcoxon's Chi2 test was performed. Reliability evaluation of the sonographic examination was done with a matched-pair analysis.

Results: Women with positive intrapartum ultrasound breech engagement sign (+IPUBES) had a significantly lower rate of cesarean section

in comparison with those with negative IPUBES (5/67; 7.5% vs. 18/39; 26.2%; p < 0.0001). Negative IPUBES predicted cesarean section with a sensitivity of 78.3% and a specificity of 25.3%. Sonographic examination showed an excellent reliability in a matched-pair analysis comparing vaginal and sonographic examination with a mean difference of 0.012 (SD ±0.027, 95% CI -0.014-0.065).

Conclusion: Sonographic evaluation of the fetal position in relation to the mother's pelvic inlet screens reliably for emergency cesarean section. This newly presented method for birth progression observation might be a powerful tool for distribution of expertise in vaginal breech delivery and is able to give reference for clinical vaginal examination by obstetricians in training.

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Maternal and neonatal outcome after vaginal breech delivery at term of children weighing more or less than 3.8 kg: follow up of a frabat prospective cohort study

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Introduction and aims of the study: High fetal estimated birth weight still is a cesarean section indication in breech presentation at term despite missing evidence for this practice. To reduce cesarean section rates and thus fetal and maternal risks and complications, it is necessary to create evidence-based guidelines and update existing ones. This study compares the maternal and neonatal outcome of newborns weighing between 2.5 kg – 3.79 kg and newborns with a birth weight of 3.8 kg and above after vaginal intended breech delivery.

Methods: The entirety of vaginal breech deliveries of children with a birth weight of 2.5 kg – 4.5 kg at the department of obstetrics at Goethe University Hospital in Frankfurt during the time of January 2004 and December 2020 was included. The comparison of neonatal and maternal outcome in a light weight group (LWG; <3,8 kg) and a high weight group (HWG; ≥3,8 kg) was analysed using Fishers exact test and Pearson's Chi Square test. To verify the relationship between caesarean section rate, birth weight and fetal outcome a logistic regression analysis was done.

Results: There was no difference recorded in perinatal morbidity and mortality between the HWG (1.5%, n = 262) and the LWG (2.1%, n = 1412). The rate of cesarean section was significantly higher in the HWG with 47.3% compared to 29.3% in the LWG with an odds ratio of 1.61 (95% CI 1.39-1.88; p < 0.0001).

Conclusion: A birth weight of 3.8 kg and above is not associated with an increase in infant or maternal morbidity after vaginal breech delivery. Nonetheless, the risk for cesarean section is elevated and should be properly communicated to patients to form a shared decision for vaginal breech delivery at term.

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Expression of placental lipid transporters in pregnancies complicated by gestational and type 1 diabetes mellitus

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Aim: The efficient supply of fatty acids is essential for proper fetal growth and development. The aim of the study was to evaluate the expression of proteins responsible for placental lipid transport such as lipoprotein lipase (LPL), endothelial lipase (EL), fatty acid translocase (CD36), fatty acid transport proteins (FATP4 and 6) and fatty acid-binding proteins (FABP1, 4 and 5) in term pregnancies complicated by gestational (GDM) and type 1 diabetes mellitus (PGDM).

Methods: A total of 80 placental samples were obtained from patients diagnosed with GDM treated with diet (GDMG1, n = 20), GDM treated with diet and insulin (GDMG2, n = 20), PGDM (n = 20) and non-diabetic control group (n = 20). Computer-assisted quantitative morphometry of immunostained placental sections was performed to determine the expression of selected proteins.

Results: Morphometric analysis performed for the vascular density-matched placental samples demonstrated a significant increase in the expression of CD36, FABP1, FABP4 and FABP5 proteins as well as decrease in the expression of EL and FATP4 proteins in PGDM group as compared to GDM and control groups (p < .05). No significant differences with regard to placental expression of LPL and FATP6 proteins were noted. Maternal pre-pregnancy weight, body mass index, LPL and FABP4 expression as well as placental weight were selected by linear regression model as the strongest predictors of the fetal birth-weight.

Conclusions: In placentas derived from pregnancies complicated by well-controlled PGDM expression of certain lipid transporters is altered. Nonetheless, only placental LPL and FABP4 expression are significant predictors of the fetal birth-weight.

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Anxiety among pregnant women during the covid-19 pandemic – A multinational cross-sectional study

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Introduction and aims of the study: Pregnancy anxiety adversely affects both mother and child. A pandemic situation has the potential to increase anxiety levels. The aim of this study was to assess symptoms of anxiety experienced by pregnant women in the time of the pandemic in various countries.

Methods: This is a multinational cross-sectional web-based survey study that included 6594 women that were pregnant during the pandemic. The survey included women from the Czech Republic, Spain, Hong Kong, Israel, Malaysia, Mexico, Poland, and Taiwan. The level of symptoms of anxiety was examined using a standardized screening tool for generalized anxiety disorder (GAD-7) as well as the author's questionnaire with specific questions regarding the pandemic. We used the propensity score matching technique to balance the groups' demographic distributions and make comparisons justifiable. We employed the random forest technique. This machine-learning algorithm was designed to perform accurate predictions considering the direct effects of variables and interactions between variables and nonlinear relationships.

Results: The highest mean GAD-7 scores were in Spain 5.9 ± 4.9, Poland 5.5 ± 4.6, and Israel 4.9 ± 4.0; moderate scores were in Hong Kong 3.6 ± 3.8, Check Republic 3.4 ± 3.8 and Mexico 3.0 ± 3.2, while the lower scores were in Taiwan 2.7 ± 2.9 and Malaysia 2.5 ± 4.8. The

diagnostic 7-point cutoff score was received by the most women in Spain (37%) and Poland (32%), whereas the lowest was in Malaysia (11%) and Taiwan (12%). Considering all regions and all explanatory variables, we found that the most important predictive variables for diagnosis of general anxiety were Body Mass Index, fear of Sars-Cov2 infectious, feeling of being limited in the field of leisure, work, and finance, as well as difficulties in childcare. In contrast, the most important protective factor in each region was having social support (partner or family).

Conclusions: Anxiety levels among pregnant women are significantly different between regions. Fear of infection as well as the restrictions-imposed increase anxiety levels. Therefore, it is important to provide special support to pregnant women, particularly by their partners and family members.

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3D imaging reconstruction and laparoscopic robotic surgery: A winning combination for a complex case of multiple myomectomy

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Introduction: Endometrial polyps, result from overgrowth of endometrial glands, stroma and blood vessels surrounded by cylindrical epithelium. Most polyps are found incidentally at ultrasound assessment and their sonographic appearance changes according to the menstrual phase of the cycle.

Aims: To determine whether the detection of a polyp during ovarian stimulation for IVF/ICSI does hinder the reproductive outcomes when compared to a freeze all (FA) strategy with hysteroscopy before frozen embryo transfer.

Methods: This was a single center retrospective cohort analysis in a tertiary fertility center. Patients aged between 18 and 42 years with a newly diagnosed endometrial polyp during ovarian stimulation for IVF/ICSI between May 2008 and July 2021 were included.

419 patients were divided into 2 groups: (i) fresh embryo transfer (N = 293) and (ii) cryopreservation of embryos followed by hysteroscopy and subsequent frozen embryo transfer (N = 126).

Information regarding patient characteristics, stimulation, embryo quality, polyp size and location, hysteroscopic findings and pregnancy outcomes were collected.

Results: General patient characteristics including mean age (36.18 ± 4,36 vs 35.90 ± 4,10, p = 0.38), BMI (24.52 ± 4,27 vs 25.68 ± 10,75, p = 0.62), IVF rank (1,42 ± 1,75 vs 1,03 ± 1,50, p = 0,01) and stimulation characteristics were similar in both groups. A minimal difference in polyp size was observed in the fresh (9,84 mm ± 4,14) vs FA (11,36mm ± 4,65) group (p = 0,004), with no significant difference in the various polyp locations. A higher number of oocytes were retrieved in the FA group (12,16 ± 8,19 vs 7,96 ± 4,89 p < 0,001) with a significantly higher % of day 5 embryo transfers (80/121 (66,12%) vs 90/293 (30,72%), P = 0,000) in the FA group. No significant difference was observed in positive pregnancy test (42,66% vs 49,21%, p = 0,217) nor live birth rates (76,45% vs 80,16%, p = 0,404) between the 2 groups.

Discussion: This study may be reassuring for physicians and patients, as the detection of a recently diagnosed and unexcised polyp is not associated with a reduction in the live birth rate.

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Is hystersocopy an accurate diagnostic method for chronic endometritis?

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Background: Chronic endometritis is a persistent inflammation of the endometrial lining caused by various bacterial pathogens. Predominantly it is asymptomatic and can be found in up to 40% of infertile patients, causing repeated implantation failure and recurrent pregnancy loss. To make a diagnosis, we used immunohistochemistry staining to identify endometrial tissue plasma cells.

Aim of the study: To analyze chronic endometritis diagnostic technics and assess the value of hysteroscopy in patients with recurrent pregnancy loss problems.

Methods: We performed diagnostic hysteroscopy with endometrium aspiration biopsy in 47 patients with a medical history of at least two miscarriages. We used immunohistochemistry staining and microbial culture to evaluate endometrial samples. In addition, we compared results with visual signs of chronic endometritis described in hysteroscopy examination.

Results: The prevalence of immunohistochemistry-confirmed chronic endometritis was 34% (16/47) and 55.3% (26/47), respectively, for CD138 and MUM1 staining. In hysteroscopy, we identified visual signs of chronic endometritis in 42.6% (20/47) of patients. Classical microbial identification of bacterial factors was possible only in 12.8% (6/47) of endometrial samples. Hysteroscopy examination showed 53% sensitivity, 63% specificity, a positive predictive value of 40%, and a negative predictive value of 70% when verified with immunohistochemistry histopathological examination of endometrium samples.

Conclusions: It is possible to make the initial diagnosis with a hysteroscopic evaluation of chronic endometritis visual signs. Because of its low sensitivity and specificity, it is necessary to confirm the final diagnosis with a histopathological examination of the endometrium sample. The immunohistochemistry MUM1 staining shows the presence of plasma cells in more endometrium samples than CD138 staining. Microbial culture of the endometrium rarely allows for identifying the bacterial factor in the chronic endometritis diagnostic process.

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Vaginal estradiol and hyaluronic acid in cervical preparation for office hysteroscopy in peri- and postmenopausal women

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Introduction and objectives: Pain accompanying office hysteroscopy is the most common reason for its discontinuation. Urogenital atrophy may cause technical difficulties in passage through the cervical canal, further increasing the pain. The aim was to evaluate the effectiveness of vaginal estriol and hyaluronic acid to facilitate diagnostic hysteroscopy in peri- and postmenopausal women.

Methods: A prospective cohort tertiary-center study (consent no. 1072.6120.128.2021) included women over 45 years of age subjected to office hysteroscopy in 2021-2022. Women who consented were assigned to three study arms: i) estriol 0.5 mg in vaginal cream twice daily for 10 days pre-procedure, ii) hyaluronic acid 5 mg in vaginal gel twice daily for 10 days pre-procedure, iii) no treatment (control). The following endpoints were compared: need for cervical dilation, incidence of severe urogenital atrophy and vaso-vagal reaction, time of cervical passage, cervical canal diameter, pain during and after the procedure in the Numeric Rating Scale (NRS).

Results: Of the 96 enrolled women, 23 received estriol, 20 hyaluronic acid and 53 received no medication. In the Chi-square test and the Mann-Whitney U test, there were no significant differences between the arms in terms of the need for cervical dilation ($p = 0.5$), severe urogenital atrophy ($p = 0.15$), vaso-vagal reaction ($p = 0.29$), cervical passage time ($p = 0.1$), cervical canal diameter ($p = 0.43$) and pain during ($p = 0.93$) and after surgery ($p = 0.17$) in NRS. Irrespective of the arm, postmenopausal women had a smaller diameter of the cervical canal ($p = 0.002$) and the need for cervical dilation was significantly more frequent ($p = 0.01$). Cervical canal diameter decreased with age (Spearman's rho $= -0.26$, $p = 0.01$) but had no effect on cervical passage time (Spearman's rho $= 0.14$, $p = 0.18$).

Conclusions: Despite the unfavorable conditions in postmenopausal women, preparation of the cervix does not seem to bring significant benefits.

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Endometriosis and obstetrics: An international, cross sectional survey study

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Introduction and aims of the study: Endometriosis is a chronic, inflammatory disease characterized by the presence of endometrial tissue outside of the uterine cavity. As previous literature indicates, there are several complications related to pregnancy and labor occurring with higher incidence in patients diagnosed with endometriosis. Evaluation of these complications and of the general short- and long- term effects requires further research. The purpose of this study is thus to investigate and provide a further discussion regarding the effect of pregnancy and labor on patients with previously existing endometriosis.

Methods: This study was conducted through a questionnaire, which investigated factors selected based on findings of an initial literature review. The initial questionnaire was created in English and further translated into 16 languages. Multi-center cooperation enabled the distribution of the questionnaire through different platforms, providing data from 2428 participants with a self-reported endometriosis diagnosis.

Results: Patients who reported previous pregnancy suffered significantly less from several mental and physical symptoms such as severe and frequent menstrual cramps, pain, depression and suicidal thoughts ($p < 0{,}001$). The study revealed that endometriosis affects in a greater degree women who were never pregnant (for example, they more frequently consider hysterectomy, experience pain and report strain in relationship to their partners). In addition, endometriosis patients suffered more frequently from both gestational and postpartum complications, such as miscarriages after the 12th week of gestation (8.2%).

Conclusions: These findings suggest that pregnancy and labor have a clinically significant effect on the mental and physical well-being of patients suffering from endometriosis. Thus, they show the importance of further assessment and reevaluation of the effects and complications these patients are more susceptible to, and that future evaluation of specialized management of endometriosis patients in respect to these effects is necessary.

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Obstetric and neonatal outcomes of pregnancy in advanced maternal age

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Objectives: We proposed to evaluate the obstetric and neonatal outcomes in Advanced maternal age pregnancy.

Methods: This was a prospective observational study involving all pregnant women >35 yrs of age attending the antenatal clinic in our unit and control patients were women <35 years of age over 12 months time. Data were analysed in terms of significant antepartum, intrapartum and postpartum complications for the mother and birth weight and NICU admission for neonates. Results were analysed by using the chi-square test. A P value of <0.05 was considered significant.

Results: 192 women participated in the study and this constituted 9.8% of total pregnant women during the study. The majority of them were primiparous compared to multi gravidae among the control group with a mean BMI of 27.2. Over one-third, (36%) of women in the study group were found to have assisted conception pregnancy in contrast to 9% in the control group which was statistically significant ($p = 0.002$). Early pregnancy loss and pre-eclampsia were higher among the women with AMA($p = 0.024$). There was a significantly higher Caesarean section rate in the study group (15%) as compared to the control group(8.7%), ($p = 0.335$) the commonest indication was the failure to

progress 39.5% .Mean birth weight was significantly lower in the study women group.

Conclusion: Women with Advanced maternal age are at higher risk of complications and adverse outcomes from the time of conception, until the postpartum period. Efficient and effective care leads to better patient care and outcome.

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Non-invasive hemodynamic assessment in obese pregnant women compared with non-obese patients: A prospective studY

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Introduction and aims: maternal hemodynamics is acquiring an increasing importance in the understanding of hypertensive disorders in pregnancy. Nowadays, preeclampsia can be considered a dysfunction of the cardiac-fetal-placental unit, rather than just a placental disease and can be classified according to its hemodynamic profile. Obese women are more frequently affected by late-onset preeclampsia, which is usually characterized by an elevated cardiac output (CO) and low total vascular resistances (TVR). This study aimed at investigating the maternal hemodynamics in pregnant obese women so as to better understand the pathogenesis of the pregnancy hypertensive disorders related to obesity.

Methods: a total of 92 normotensive obese pregnant women, without other risk factors for hypertensive disorders, were enrolled after having obtained written informed consent, before 20 weeks' gestation. Three non-invasive hemodynamic evaluations were made during the pregnancies with USCOM® and then compared to healthy and normal weight pregnant women.

Results and discussion: obese women showed a hemodynamic profile characterized by higher mean arterial pressure, heart rate, CO and cardiac inotropy, estimated by the Smith-Madigan formula. Stroke volume, TVR and Potential to Kinetic Ratio were superimposable and the differences not statistically significant, except for the third measurement in which TVR showed significantly lower values in obese women. After the correction for body surface, all the parameters, including the Smith-Madigan Inotropy Index, showed significantly lower values.

Conclusions: the study data indicated that obese women have specific hemodynamic differences compared to non-obese women, which may indicate a predisposition to late onset forms of preeclampsia. Recent studies have reported that the hemodynamic pattern of preeclampsia is strongly correlated with the association of fetal growth restriction (FGR), rather than gestational age at onset. The data herein reported, together with lower rate of FGR in late onset preeclampsia, strengthen the idea that early and late preeclampsia have different pathogenesis.

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Performance of contrast enhanced ultrasound to diagnose ovarian torsion

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Objectives: Evaluate the diagnostic performance of contrast enhanced ultrasound (CEUS) for the diagnosis of adnexal torsion in women with suspected adnexal torsion, with a qualitative analysis of signal intensity.

Methods: This was a monocentric, prospective comparative, non randomised, open and interventional study conducted in Nancy in France. Women were recruited in the emergencies between April 2021 and September 2022. All women with planned surgery for suspicion of adnexal torsion were included in the study. A contrast enhanced ultrasound acquisition was performed before the surgery both on the suspected ovary and the healthy ovary if available. The presence or absence of torsion was confirmed during the surgical intervention and women were classified into two groups "ovarian torsion" or "no ovarian torsion". The qualitative imaging analyses were performed blindly of the final diagnosis by an obstetrician and according to the presence or absence of contrast enhancement of the ovary.

Results: Eleven women were included and imaging was available for nine women (81%). The surgery has confirmed seven ovarian torsion (54% i.e. 36% of false positive with unnecessary surgery). Fourteen ovaries could be analyzed including 6 torsions and 8 healthy ovarian (including contralateral and suspected ovaries). Comparing the surgical reports with the qualitative analysis of contrast enhancement, we found 6 true positive, 1 false positive, 0 false negative and 7 true negative. For the detection of ovarian torsion, the sensitivity was 100%; the specificity 87,5%; the positive predictive value 85,7%; the negative predictive value 100%. The positive likelihood ratio was 8 and the negative likelihood ratio was 0. Index's Youden was 0,875.

Conclusion: This is the first study to evaluate ultrasound with contrast injection as a new diagnostic tool in adnexal torsion in adults. The diagnostic accuracy of CEUS seems good and better than the 2D conventional ultrasound only.

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Association of first trimester biochemical screening markers with adverse outcomes in pregnancies resulting from assisted reproduction techniques versus spontaneous pregnancies

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Introduction: The 1st trimester biochemical screening (BS) seems to be influenced by Assisted Reproduction Techniques (ART), particularly in pregnancies with oocyte donation (OD). The aim of this study was to evaluate the influence of the type of conception on BS and in obstetric/neonatal adverse outcomes.

Methods: An observational multicentric retrospective study, involving 3 Health Care Units in Portugal was performed during a 6-years period and included 551 women. All pregnancies resulting of ART-OD (n = 59) were included. Two control groups were established, one with pregnancies that resulted ART with autologous oocytes (ART-AO), n = 227 and other with spontaneous pregnancies (SP), n = 265. Control groups were selected in a ratio of 1:4 and adjusted to the Health Care Unit, maternal age, and body mass index. Patients with incomplete information, multiple pregnancies, fetal dismiss <14 weeks or fetal major malformations were excluded. Statistical data treatment was performed using the IBMSPSS Statistics®v.23 and a significance level of 0.05 was assumed.

Results: ART-OD group had significantly lower PAPP-A values (Mdn = 0.76; IQR = 0.62) compared to ART-AO group (Mdn = 0.93; IQR = 0.75) and the age-matched SP group (Mdn = 1.03; IQR = 0.71). No differences were found regarding other 1st trimester combined screening markers or invasive diagnostic procedures. Univariate analysis showed that the ART-OD group had significantly more fetal growth restrictions (FGR) p = 0.007, c-section, p < 0.001 and low birth weight newborns (LBWN), p < 0.01. Values of PAPP-A ≤ 0.40MoM were significantly associated to FGR (p = 0.001) and LBWN (p = 0.002). A multivariate analysis showed an increase in odds of FGR occurrence of 3.7 [*CI* = 1.12-12.25] in ART-OD group, 3.69 [*CI* = 1.11-12.34] in ART-AO group, and 4.76 [*CI* = 1.63-13.92] when PAPP-A ≤ 0.40MoM. Regarding the occurrence of LBWN, the increase in OR is 3.02 [*CI* = 1.30-7.07] in ART-OD group and 4.66 [CI = 1.49-14.59] if PAPP-A ≤ 0.40MoM.

Conclusion: Type of conception, particularly ART-OD, and PAPP-A values, seem to influence the occurrence of adverse obstetric outcomes, specifically FGR and LBWN.

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Sflt/plgf ratio as a predictor of preeclampsia in covid-19 pregnant patients

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Background: The association between SARS-CoV-2 infection in pregnancy and preeclampsia is widely debated in numerous studies. The aim of our study was to investigate whether an increased sFlt-1/PlGF ratio is a good marker of preeclampsia in pregnant patients with COVID-19 infection.

Methods: This single-center prospective study was conducted in the Department of Obstetrics and Gynecology, at the Central Clinical Hospital of the Ministry of the Interior and Administration in Warsaw. The study group consisted of 68 COVID-19 pregnant patients and 57 SARS-CoV-2 negative pregnant controls. Serum sFlt-1/PlGF ratio was assessed. The two groups did not differ in terms of the frequency of IVF, nulliparity, history of hypertension, pre-gestational diabetes and chronic kidney disease. The primary outcome was the diagnosis of preeclempsia.

Results: Preeclampsia was diagnosed in 10 patients in both groups (14.7% of the patients in COVID-19 group and 17.5 % in control group). The sFlt-1/PlGF ratio higher than 38, considered highly suggestive of developing preeclampsia, was found in 20 patients (29.41%) in the COVID-19 group and 15 patients (26.32%) in the control group. The odds of developing pre-eclampsia in patients with sFlt-1/PLGF ratio >38 was approximately 4-fold higher in COVID-19 group (OR = 4.71; 95% CI 1.16-19.13, p = 0.030) and 11-fold higher in controls (OR = 11.38; 95% CI 2.41-53.69, p = 0.002).

Results: Preeclampsia was diagnosed in 10 patients in both groups (14.7% of the patients in COVID-19 group and 17.5 % in control group). The sFlt-1/PlGF ratio higher than 38, considered highly suggestive of developing preeclampsia, was found in 20 patients (29.41%) in the COVID-19 group and 15 patients (26.32%) in the control group. The odds of developing pre-eclampsia in patients with sFlt-1/PLGF ratio >38 was approximately 4-fold higher in COVID-19 group (OR = 4.71|Results: Preeclampsia was diagnosed in 10 patients in both groups (14.7% of the patients in COVID-19 group and 17.5 % in control group). The sFlt-1/PlGF ratio higher than 38, considered highly suggestive of developing preeclampsia, was found in 20 patients (29.41%) in the COVID-19 group and 15 patients (26.32%) in the control group. The odds of developing pre-eclampsia in patients with sFlt-1/PLGF ratio >38 was approximately 4-fold higher in COVID-19 group (OR = 4.71; 95% CI 1.16-19.13, p = 0.030) and 11-fold higher in controls (OR = 11.38; 95% CI 2.41-53.69, p = 0.002).

Conclusions: Sflt-1/PlGF ratio does not differ significantly between the SARS-CoV-2-positive and SARS-COV-2-negative pregnant patients. The sFlt-1/PlGF ratio >38 is associated with higher odds of the diagnosis of preeclampsia in both of these groups, and therefore may serve as its marker regardless of COVID-19 infection status.

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Hypertension in pregnancy: Obstetric interventions and neonatal outcomes – A retrospective study

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Chronic hypertension (CHT) in pregnancy is defined as hypertension (HT) before pregnancy or <20th week of gestation, after that is considered gestational hypertension (GHT). The study aimed to verify the obstetric/neonatal outcomes in pregnant with CHT or GHT compared to low-risk pregnant.

Retrospective study of pregnant with CHT or GHT and low-risk pregnant surveilled at CHTV, between January 2020 and December 2021. Data were collected from clinical records. Statistical analysis was made using $\chi 2$ test and ANOVA. p-value <0.05 was considered statistically significant.

At CHT Group (N = 36): 33.3% nulliparous, 47.2% delivered by cesarean (17.6% due to HT complications), median gestation age (GA) of 38 weeks, 82.1% with Apgar Score 10 at the 5th minute, mean birth weight was 3095 gr. GHT Group (N = 35): 40% nulliparous, 51.4% delivered by cesarean (22.2% due to HT complications), median GA of 38 weeks, 81.1% with Apgar Score 10 at the 5th minute, mean birth weight was 3079 gr. Low-risk Group (N = 961): 51.6 % nulliparous, 22.5% delivered by cesarean, median GA of 39 weeks, 89.2% with

Apgar Score 10 at the 5th minute, mean birth weight was 3286 gr. Women with GHT or CHT had higher cesarean delivery than the low-risk group ($p < 0.05$). The probability of a woman with GHT having a cesarean is 29% greater than the low-risk group ($p < 0.001$). It is 25% higher in CHT than in the low-risk group ($p = 0.02$). Women with GHT or CHT had lighter babies than the low-risk group ($p < 0.05$). Women with GHT or CHT had lower GA ($p < 0.001$). No statistically significant association was found between HT and Apgar Scores.

Women with GHT and CHT had babies with lower birth weights and lower GA than the low-risk group. HT was a significant factor in the obstetric outcome.

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The impact of maternal cardiac remodelling on pregnancy outcome in pre-eclampsia

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Introductions and aims of study: Preeclampsia, a multisystem disorder impacts 3-5% of all pregnancies. It effects maternal cardiovascular system to varying degrees of severity. We aimed at comparing the alteration in cardiovascular functions and pregnancy outcome between normal pregnant women to those complicated by pre-eclampsia.

Methods: A single centre, prospective, cross-sectional case -control study was conducted. 39 healthy pregnant and 22 women with Pre-eclampsia were recruited, all in third trimester, matched for age and ethnicity. Participants underwent Phosphorus magnetic resonance spectroscopy and cardiovascular magnetic resonance imaging for assessment of cardiac functions.

Results: The pre-eclampsia group exhibit higher booking BMI, pregnancy weight gain, MAP at booking as compared to the healthy pregnancies. Maternal Cardiac output, left ventricular ejection fraction and. myocardial energetics were significantly reduced in pre-eclampsia. Neonatal birth weight adjusted for gestational age recorded in grams was lower in Preeclampsia as compared to Healthy pregnancies (3390 ± 872 vs 2736 ± 996 $p = 0.01$). The placental weight was significantly lower in pre-eclampsia (487 ± 30 vs 379 ± 70 $p = <0.001$) Average blood loss at delivery in preeclampsia was significantly higher as compared to Healthy (566 ± 405 vs 337 ± 300 $p = 0.03$). Histological examination of placenta revealed high prevalence of maternal vascular mal perfusion and infarcts in preeclampsia. Logistic regression model showed positive relationship existed between cardiac output, neonatal birth weight and placental weight in pre-eclampsia. However, LV mass and LVEF impose negative impact on birth weight and placental weight.

Conclusion: The study demonstrated that the cardiac structural and energetic parameters are impaired in pregnancies complicated by pre-eclampsia. Also, the contribution of reduced cardiac output to further lowering down birthweight in preeclampsia in addition to the placental mal perfusion. These adverse phenotypic features may be important components of the worse pregnancy outcome in Pre-eclampsia.

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The sFLT-1/PLGF ratio values within the <38, 38–85, >85 brackets as compared to perinatal outcomes

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Aim: Soluble fms-like tyrosine kinase-1 (sFlt-1) and placental growth factor (PlGF) are used as markers of preeclampsia. The aim of this paper is to ass's correlations between the sFlt-1/PlGF ratio values within the <38, 38–85, >85 brackets and perinatal outcomes in pregnancies that require the determination of these markers.

Material and methods: 1868 pregnant patients between 18 and 41 weeks' gestation suspected of or confirmed with any form of placental insufficiency (preeclampsia, IUGR, gestational hypertension, HELLP syndrome, placental abruption). In each case sFlt-1/PlGF ratio was calculated. Patients were divided into three groups according to sFlt-1/PlGF ratio brackets of <38, 38–85 and >85. The primary outcome was predicting PE and secondary outcomes included predicting adverse outcomes.

Results: PE was diagnosed more often in the sFlt-1/PlGF >85 group, than <38 and 38-85 (17,90% vs. 10,38% and 10,59% respectfully ($p < 0.001$)). Significantly worse perinatal outcomes were found in the sFlt-1/PlGF >85 group, primarily with lower cord blood pH (7.29 vs. 7.30 and 7.32 ($p < 0.001$), neonatal birth weight (2334g vs. 2796g and 2811g ($p < 0.001$)), shorter duration of gestation (34 vs. 37 and 37 wks ($p < 0.001$)) and time to delivery (5.64 vs. 11.18 and 25.38 days to delivery ($p < 0.001$)). In the sFlt-1/PlGF group >85, preterm delivery was statistically the most common. 79.26% of patients in this group gave birth prematurely compared to 37,68% in the sFlt-1/PlGF <38 group and 42,95% in the middle group ($p < 0.001$).

Conclusions: The sFlt-1/PlGF ratio value of >85 suggests that either preeclampsia or one of the other placental insufficiency forms may occur, associated with lower cord blood pH, newborn weight and earlier delivery.

Determining and calculating the sFlt-1/PlGF ratio in pregnancies complicated by placental insufficiency may lead to better diagnosis, therapeutic decisions and perinatal outcomes.

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Post-ASPRE era: implementation of aspirin use among high-risk groups for preeclampsia and FGR in the Polish population

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Background: During first trimester of pregnancy, we are able to isolate a group at increased risk of preeclampsia and fetal growth restriction. It has been proven for years that acetylsalicylic acid reduces the incidence of PE and FGR, but ASPRE study finally confirmed these hypotheses. The aim of this study was to evaluate the implementation

of aspirin use on the occurrence of perinatal complications in a Polish population.

Material and methods: A total of 908 patients were enrolled in the study during first trimester ultrasound examination, where the risk of PE and FGR was assessed according to FMF guidelines using: maternal history, MAP, UtPI, PAPP-A and PLGF. Among patients with risk higher than >1:100, aspirin was administered at a dose of 150mg. Perinatal outcomes were assessed among the groups.

Results: Comparing women in high-risk group with those in low-risk group, there was a statistically significant higher incidence of pregnancy complications in the high-risk group. These were especially PIH(13.5% vs. 5.3%), total PE(11.5% vs. 1.5%), late-onset PE(9.6% vs. 1.2%), FGR(17.3% vs. 4.5%), GDM1(25.9% vs. 12.2%), pregnancies were more likely to end with cesarean section(71.2% vs 54.4%), while the newborns had statistically significantly lower weights(<10pc (8.6% vs 3.1%), <3pc(3.9% vs 0.5%)). When patients with chronic hypertension were excluded from the analysis, most observations were similar, but then not a single case of early-onset PE was diagnosed in the high-risk group.

Conclusions: Women at high risk of PE and FGR are at much higher risk of developing various pregnancy complications, and thus should receive special care. Aspirin may be an effective weapon to protect them from the development of some of them. Our observations confirm that among patients without chronic hypertension, it is also a tool that prolongs the pregnancy thereby reducing fetal and neonatal morbidity and mortality.

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The renaissance of the vaginal route surgery in gynecological practice – A comparative study

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Introduction and aims: Vaginal natural orifice transluminal endoscopic surgery (vNOTES) is a minimally invasive technique that uses the vagina to access the abdominal cavity for surgery. Potential benefits of vNOTES hysterectomy include no visible scars, less pain, avoidance of trocar-related complications, and a shorter hospital stay compared with total laparoscopic hysterectomy (TLH). This study aimed to compare the surgical outcomes of TLH and vNOTES hysterectomy procedures.

Methods: A retrospective cross-sectional study was conducted in a tertiary care center in Portugal with 38 women who underwent TLH (46 patients) or vNOTES hysterectomy (12 patients) for benign gynecological indications. The variables duration of surgery, intra/postoperative complications, duration of hospital stay, and Visual Analogue Scale (VAS) scores in the pre-operative and postoperative periods were compared.

Results: There were no significant differences between vNOTES and TLH groups regarding parity (p = 0,129), preoperative VAS score (p = 0,438), uterine weight (92,57 vs. 130,69 g; p = 0,165), previous abdominal surgeries (p = 0,395), and median body mass index (25,68 vs. 26,12 kg/m2; p = 0,808). The groups were different regarding age (56,42 vs. 46,17; p = 0,008). The D0 VAS score was lower in the vNOTES groups compared to the TLH group (p = 0,063), although the results were not statistically significant. No statistically significant differences between the groups in terms of D1 VAS score, VAS maximal score or VAS score at the time of discharge were found (p = 0,118; p = 0,238 and p = 0,351, respectively). There were no differences between vNOTES and TLH groups regarding duration of surgery (78,92 vs. 73,91 min; p = 0,324), duration of hospital stay (3,33 vs. 3,72 days; p = 0,263) and intraoperative or postoperative complications (p = 0,492 and p = 0,178, respectively).

Conclusion: In our study, vNOTES displayed more favorable outcomes compared to TLH in terms of pain scores, without an increase in complications or duration of hospital stay.

Keywords: vNOTES, TLH

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Lateral suspension with v-notes technique (v-nt)

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Natural orifice surgeries have recently gained popularity in the field of Obstetrics and Gynecology with the development of endoscopy. There is a big challenge with natural orifice surgeries especially in patients with uterine prolapse or uterin descent because of absence of standard antiprolapse surgical technique. In conclusion aim of this study is to apply the lateral suspension with V-NT in a more minimally invasive way instead of frequently performed laparoscopically.

It is compared with statistically significant 50 volunteer patients which were performed V-NT -only mesh incisions on the abdomen to be used for lateral suspension- with other antiprolapse surgeries.

Our application of V-NT consist on the Alexis Small Wound Closure bag and glove.

This techniques steps are respectively:

Anterior and posterior colpotomy which the Alexis bag was placed include the cervix.

The glove fingers one 10 and two 5 trocars were placed to the end of the Alexis bag where is the vaginal facing.

Hysterectomy performed.

Lateral suspension performed using a 30-degree camera and it was performed by using a small incision in the abdomen under the peritoneum which allow only the mesh to enter.

Laparoscopic lateral suspension technique is similar to V-NT, except the camera was in the Alexis bag in the vagina.

Lateral suspension with V-NT was performed using Transobturator Tape (TOT) mesh. It consist on precise steps to suture mesh to the anterior, posterior and lateral sides of the cuff internally. After the cuff had sutured, the vaginal cuff was pulled upwards together with the remaining mesh arms and finally the prolapse was treated.

The duration of the operation, amount of bleeding, duration of discharge and examination findings on the 1st day and 1 month after the operation was compared with patients who had antiprolapse surgery in our clinic without V-NT.

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Prediction of venous thromboembolism risk associated with combined oral contraceptives: an exploratory model

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Introduction and aims of the study: Combined oral contraceptives (COCs) containing ethinylestradiol (EE) increase venous thromboembolism (VTE) risk compared to non-users. COCs with estradiol (E2) have been introduced to lower this risk. Activated protein C resistance (APC-R), a dysregulation of hemostasis, is recognized as a risk factor for VTE in COC users. The endogenous thrombin potential (ETP)-based APC-R assay is the most suitable assessment of COC-induced coagulation changes. We aimed to model ETP-based APC-R outcomes in users of various COCs and non-users and assessed the model's correlation with VTE risks observed in epidemiological studies. In addition, we intrapolated the expected VTE risk of the new COC estetrol(E4)/drospirenone on this correlation model.

Methods: We collected ETP-based APC-R data from COC users (EE 20 μg/levonorgestrel [n = 28]; EE 30 μg/levonorgestrel [n = 36]; EE 20 μg/desogestrel [n = 37]; EE 30 μg/desogestrel [n = 7]; EE 35 μg/cyproterone acetate [n = 3]) and non-COC users (n = 162). We created a model for the association of these ETP-based APC-R values and established VTE-associated relative risks (RRs) in published epidemiological studies. We measured the strength of the association using goodness-of-fit and Spearman's rank correlation testing. We used the model to then estimate VTE RR based on ETP-based APC-R values for EE 30μg/dienogest (n = 14), E2/nomegestrol acetate (NOMAC) (n = 7) and E4/drospirenone (n = 32) users.

Results: The model provided an exponential growth equation (Y = 0.7038 * exp(0.3391 * X)) with excellent goodness-of-fit (R^2 = .98) and Spearman's rank correlation (Rs = 1.00). Based on this model, we calculated RR estimates for EE/dienogest (3.70), E2/NOMAC (1.68), and E4/drospirenone (1.53) versus non-COC users.

Conclusion: This exploratory model strongly correlated with predicted RR estimates from published post marketing surveillance data comparing EE/dienogest and E2/NOMAC VTE risk versus non-users. The low predicted risk for E4/drospirenone fits with clinical studies results showing its low impact on hemostasis. These findings support ETP-based APC-R as a surrogate biomarker to estimate VTE risk of a particular COC.

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Ultrasound examination in late purperium in prediction of *niche*

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With the increase in the number of cesarean sections attention focused on the development and consequences of *niche* (cesarean scar defect-CSD) visible on transvaginal ultrasound examination (TVUS) as an indentation in the uterine scar. Most publications showed a decreasing rate of CSD with time after cesarean section (CS), however there were few analyses of prognostic value of TVUS in late puerperium in prediction of *niche* in TVUS 3 months and later after CS.

The aim of this study was to evaluate the predictive value of TVUS at 5–8-weeks after CS (TVUS-1), in prediction of *niche* in TVUS 12–16-weeks after surgery (TVUS-2).

The study group consisted of 116 women who underwent CS followed by TVUS-1 and TVUS-2 in which presence of *niche* was noted, defined as indentation with the depth ≥ 2 mm. Residual-myometrial-thickness (RMT), depth, length, width of *niche* were measured and tested to evaluate predictive value of the TVUS-1 using logistic regression, analysis of the area under the ROC curve (AUC), sensitivity, specificity, PPV, NPV.

The incidence of *niche* in TVUS-1 and TVUS-2 was 69.0% and 37.1% respectively; p < 0.001. Logistic regression showed that presence of CSD in TVUS-1 significantly increased risk of *niche* in TVUS-2 (OR13.41 (2.92–61.68); p < 0.001), however presence of CSD in TVUS-1, without analysis of its dimensions, showed high sensitivity (95.4%) and NPV (94.4%) with low specificity (46.6%) and PPV (51.2%) in prediction of *niche* in TVUS-2.

The highest values of AUC (0.801) and sensitivity (93.0%) for prediction of *niche* in TVUS-2 were found if one of the three dimensions of the CSD in TVUS-1 exceeded a set threshold (depth ≥ 4.5 mm; length ≥ 7.0 mm; width 7.5 mm).

TVUS in late puerperium showed potential in prediction of *niche* in TVUS 3-4 months after CS.

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Women's reproductive health in Ukraine during the full-scale military invasion

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Objective: To study the features of the hormonal profile in women of reproductive age who suffered a contusion during the full-scale military invasion.

Method: The study was conducted on the basis of the Department of Obstetrics, Gynecology and Reproduction and in the Reproductive Technology Clinic Shupyk National Healthcare University of Ukraine.The research included 457 women of reproductive age (RA) who suffered a contusion during the full-scale military invasion. 246 patients (comparison group) – women RA with concussion in history without postconcussion syndrome and 211 (main group)-women of RA with concussion and postconcussion syndrome. The control group-30 conditionally healthy women of RA without concussion experience. The average age of the subjects is 37.08 ± 4.23 years. The time from the moment of receiving contusion is 18.8 ± 9.2 months.

Results: In women who suffered a concussion in the early follicular phase of the menstrual cycle increased FSH level relative to the control group by 1.11 times (p < 0.004), LH–1.32 (p < 0.0001), LH/FSH coefficient–1.22 times; E2–1.25 times ($p_к$ < 0,0004) and Tf–1.36 times ($p_к$ < 0,0001). During ovulation, the average level of FSH is 1.14 times lower (p < 0.002), LH–by 1.25 (p < 0.0001). In the mid-luteal phase of

the menstrual cycle – the concentrations of FSH and LH do not have discrepancies with the control indicators; E2 is less by 1.21 times ($p_к < 0.0003$), P–by 1.45 times ($p_к < 0.0001$), and the E2/P is 1.38 times higher ($p < 0.0001$). In patients with a history of concussion and with postconcussion syndrome, changes in the hormonal profile of peripheral blood serum are more pronounced than in women without postconcussion syndrome.

Conclusions: Researching and correction of hormonal levels in women of RA who suffered a contusion during the full-scale military invasion is a necessary part for the restoration and preservation of reproductive health of women in Ukraine.

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Associations between maternal first trimester simple nutritional score, early placental markers and pregnancy outcome: preliminary results of a prospective multicenter Italian study (simple study)

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Introduction and aims of the study: Currently, the adherence to nutritional guidelines is critically low, therefore an early nutritional screening represents a critical subject in pregnancy. The present study aims to identify the associations between nutritional habits in the first trimester, early markers of placental function, and pregnancy outcome in a large population of singleton pregnancies.

Methods: The Simple Study is an ongoing longitudinal prospective multicenter Italian study.

Ongoing pregnancies were enrolled at the ultrasound scan of the first trimester combined screening test. A nutritional score (0–10) measuring the adherence to a healthy diet was calculated through an adapted version of the questionnaire of the International Federation of Gynecology and Obstetrics. At enrollment, first trimester placental markers (placental volume, uterine arteries Doppler velocimetry, biochemical markers) were collected. Associations between maternal nutritional score, first trimester placental markers, and pregnancy outcomes were investigated by using multi-adjusted general linear models. Chi square and risk calculation were performed to evaluate the relative risk of pregnancy complications in case of low nutritional score (<5).

Results: 2735 pregnancies were enrolled. The first trimester nutritional score was positively correlated with maternal age and education, negatively correlated with BMI and smoking habit. Southern Italian centers showed significantly lower nutritional score. Multivariate analyses adjusted for confounding factors showed significant associations between nutritional score and first trimester placental markers. Birth outcomes were available for 1442 pregnancies (52.7%). Hypertension in pregnancy and C-section rates were significantly higher in case of low nutritional scores.

Conclusions: Preliminary results of the Simple Study demonstrate that a first trimester nutritional score measuring maternal adherence to a healthy diet is significantly associated with early placental markers and birth outcomes. The present study will set the stage for introducing a reproducible, time-saving and low-cost nutritional screening in pregnancy, with potential large impact on pregnancy outcome.

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Absence of hernia sack in patients undergoing prenatal repair of spina bifida increases the risk of developing shunt-dependent hydrocephalus

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Spina bifida aperta (SBA), with (myelomeningocele) or without (myeloschisis) a hernia sack, is the most common congenital defect of the central nervous system. Prenatal surgical closure of SBA lowers the risk for developing shunt-dependent hydrocephalus, offering a chance at better motor, urinary and gastrointestinal function. A total of 96 patients undergoing open fetal surgery for SBA were analyzed. The patients were subdivided into Group I – 12 (12.5%) – without a hernia sack (myeloschisis) and Group II – 84 (87.5%) – with a hernia sack (myelomeningocele). In this study, we demonstrated that prenatal SBA repair was statistically significantly less often associated with the need for ventriculoperitoneal shunting ($p > 0.00001$). The shunting was statistically significantly more often required in Group I ($p > 0.004$). Myeloschisis increases the risk for developing shunt-dependent hydrocephalus in patients after prenatal SBA repair. However, since fetal surgery for SBA is associated with better motor, urinary and gastrointestinal function, higher risk for developing shunt-dependent hydrocephalus in fetuses without a hernia sack should not be treated as a contraindication to prenatal intervention.

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Evaluating prenatal ultrasonographic predictors of complex gastroschisis

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Background: Gastroschisis is a congenital anterior abdominal wall defect where herniated abdominal visceral contents are present. It is usually isolated, not associated with other congenital anomalies nor any risk of aneuploidy.

It is classified as either simple or complex. Complex gastroschisis is defined by the presence of either congenital intestinal atresia, necrosis, stenosis, perforation, or volvulus [1,2]. Newborns with complex gastroschisis have longer hospital stays, are more likely to be discharged from the hospital with parenteral nutrition, whereas their morbidity and mortality rates almost 7.6 times higher [1].

Although gastroschisis is often diagnosed from the first trimester, there are conflicting data regarding the prognostic value of sonographic findings when it comes to predicting outcomes in different forms of gastroschisis. Numerous attempts have been made to correlate antenatal ultrasound findings with neonatal outcomes as to identify those cases that might benefit from obstetric intervention, improved parental counseling as well as timely surgical preparation.

Objectives: The aim of this study was to help us to better identify the prenatal ultrasonographic features that can differentiate between simple and complex forms of gastroschisis and assess their predictive value.

Method: We've completed a monocentric retrospective review of 120 pregnancies with isolated fetal gastroschisis admitted between 2003-2021 at Jeanne de Flandres Hospital, a Level 3 Maternity comprising a level 3 NICU.

Results: In our cohort, extra-abdominal bowel dilation along with a cut-off size of 18 mm as well bowel dilatations (intra-abdominal and extra-abdominal comprised) occurring anywhere after 28 weeks of gestational age were predictive of complex forms of gastroschisis. Our findings were in accordance with those of other studies, prospectiva, retrospective and meta-analyses, however due to the small number of cases, type of study and discrepancy in findings, it prevents a firm conclusion from being drawn, however it once again emphasizes the importance of distinguishing between simple and complex gastroschisis in order to predict postnatal outcomes.

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Mirna expression in cesarean scar endometriosis

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Introduction and aims of the study: MiRNAs are short, noncoding RNAs, that are involved in RNA silencing and post-transcriptional regulation of gene expression. Unique expression profiles of miRNAs have been reported in multiple diseases. The aim of our study was to determine whether micro-RNAs expression vary between different form of endometriosis, with the emphasis on miRNAs expression in cesarean scar endometriosis

Methods: Experimental laboratory study in university setting comprising 47 patients with endometrioma (=ovarian endometrial cyst, OE), 14 patients with DIE (deep infiltrating endometriosis), 30 patients with endometriosis in the cesarean scar (scar endometriosis = SE); as control group served 33 patients with „healthy ovarian tissue" – control group = CG; micro RNAs expression in FFPE samples of SE, OE, DIE, healthy ovarian tissue was measured.

Results: After first step of miRNA screening analysis on set with 754 genes, we found that seven miRNAs were dysregulated in the whole group of endometriosis. Out of miR-1-3p, miR-31-3p, miR-125b-1-3p, miR-200b-3p, miR548d, miR502 and miR503, only miR-31-3p and miR125b-1-3p had significantly higher expression levels in SE as compared to other form of endometriosis and healthy controls. miR548d and miR-502 and miR-503 were present in several form of endometriosis at comparable level. miR-200 had the highest expression in DIE ($p < 0,01$).

Conclusion: miR31 and miR125 expression in SE confirm benign potential of this form of endometriosis. miRNAs profile differs in each form of endometriosis. This fact can be used in the future when planning therapy or when establishing the risk of malignant transformation of endometriosis.

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The expression of nerve growth factor and follicle-stimulating hormone receptor in endometrial ovarian cysts

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Background: The benign ovarian cysts are common sonographical findings in women of reproductive age. The main goal of clinical practice is proper qualification to treatment. As well as diagnosing pelvic pain.

Aim of the study: In our study we assessed for the first time the expression of nerve growth factor (NGF) and follicle-stimulating hormone receptor (FSHR) in the ovarian cysts of different origin, especially endometrial ones.

Methods: The group consists of 103 patients aged between 18 and 55. Archival paraffin blocks-59 cases of endometrial cysts (study group) and 44 cases of combined two subgroups: dermoid and simple ovarian cysts (control group). Using a histologic scanner Pannoramic MIDI (3DHistech), the most representative areas were selected and obtained for the tissue microarray(TMA Grand Master; 3DHistech). The immunohistochemical reactions were performed using specific antibodies against NGF and FSHR and quantified by using semiquantitative ImmunoReactive Score (IRS) method. The statistical analysis was performed using RStudio 4.2.0. P-values < 0.05 were considered statistically significant. The Shapiro-Wilk test was used to check results for normal distribution of investigated parameters. The Mann–Whitney–Wilcoxon test (differences) and Pearson correlation coefficient (linear relations) were used.

Results: Painful periods were reported by 36 patients (41.38%), painless were reported by 51 (58.62%). Mean IRS FSH value in the group of endometrial cysts was 5.37 (SD = 2.37) versus 4.11 (SD: 2.26) in the control group ($p = 0.027$).Mean IRS NGF value in the study group was 2.15 (SD = 0.79) vs 1.95 (SD = 0.97) in the control group ($p = .2039$). Positive correlation was demonstrated between IRS FSH and IRS NGF($R = 0.5500$;95% CI:0.3827–0.6823; $p < 0.0001$) in the study group.

Conclusions: The increased expression of FSHR in the endometriomas and correlation with painful periods was disclosed, same as increased expression of NGF is characteristic not only of ovarian endometriosis. It shows potential clinical implication for tailored therapy as well should be evaluated in the further research.

Increased Nuchal translucency and Associated Chromosomal Aberrations Detected by Array Comparative Genomic Hybridisation (aCGH) Among Patients Referred to National Polish Prenatal Screening Program: a Multicenter Cohort Study.

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Increased nuchal translucency and associated chromosomal aberrations detected by array comparative genomic hybridisation (acgh) among patients referred to national polish prenatal screening program: A multicenter cohort study

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Objective: To evaluate the results of array comparative genomic hybridisation (aCGH) in 992 fetuses according to nuchal translucency (NT) thickness: 95th percentile-2.9mm, 3.0-3.4mm and ≥3.5mm. Second objective was to analyze aCGH results in fetuses with isolated increased NT.

Methods: A retrospective cohort study carried out at tertiary Polish centers for the prenatal diagnosis—the Department of Obstetrics and Perinatology, Cracow; Department of Medical Genetics, Institute of Mother and Child in Warsaw between January 2018 and December 2021.

Results: We included 142(14.3%) fetuses with NT 95th percentile-2.9mm, 229 (23.1%) with NT 3.0-3.4mm, and 621 (62.6%) with NT ≥3.5mm. In 992 fetuses with NT ≥95th percentile pathogenic chromosomal aberrations were present in 35.7%. Numerical chromosomal aberrations were detected in 29.1% of cases (289/992) and in the rest of euploid fetuses pathogenic CNV (pCNV) were present in 65 cases (9.2%; 65/703). The most common numerical aberration was trisomy 21 followed by Turner syndrome and trisomy 18. In 31.1% of cases with NT ≥95th percentile there were associated structural anomalies and the cardiovascular anomalies were the most common (10.8%). In fetuses with NT≥3.5mm numerical chromosomal aberrations consisted 36.2% (225/621) and among rest 396 euploid fetuses pCNV were present in 13.4% (53/396). In group with NT 3.0-3.4mm numerical chromosomal aberrations were detected in 18.3% (42/229) and pCNV in 4.3% (8/187) of rest euploid fetuses. In subgroup with NT 95th percentile-2.9mm numerical chromosomal aberrations consisted 15.5% (22/142) and in 120 fetuses with normal karyotype pCNV were revealed in 3.3% (4/120). aCGH revealed additionally pCNV in 13.0% of fetuses with isolated NT≥3.5mm and in 1.3% and 1.6% of fetuses with isolated NT 3.0-3.4mm and between 95th percentile and 2.9mm respectively.

Conclusion: Our study demonstrates the benefit of aCGH in the prenatal setting after first trimester screening, especially in the etiological diagnosis of fetuses with NT≥3.5mm, even when it is an isolated symptom.

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Perinatal outcomes and prognostic factors in fetal megacystis cases diagnosed at the second trimester of pregnancy

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Objective: To evaluate the prognostic factors for aneuploidy rate, additional anomalies, perinatal outcomes and long-term survival in megacystis cases diagnosed in the second trimester.

Method: Megacystis cases detected in our clinic between January 2014 and December 2021 were analyzed retrospectively. Ultrasound findings, genetic results, perinatal results, neonatal follow-up and examination results that could be prognostic in diagnosis and follow-up were revealed from hospital records. Findings were compared between both groups, including the first year fetal and postnatal loss and long-term survival group

Results: During the study period, megacystis was detected in the second trimester in 40 fetuses. Aneuploidy rate was 16.6% in 31 patients who underwent prenatal cytogenetic analysis. Fetal loss rate is 61.1% and live birth rate is 38.8%. The long-term survival rate in the entire study group was 13.8%. In long-term surviving fetuses, additional anomaly findings on ultrasound, presence of renal cortical dysplasia, aneuploidy, persistence of megacystis, bladder diameter, and oligo-anhydramnios rates are lower. While bladder diameter did not show a statistically significant difference between the two groups, the ratio of bladder diameter to biparietal diameter (LBD/BPD) was significantly higher in fetuses with poor prognosis. LBD/BPD >0.96 was found to be an optimal cut-off value for poor prognosis, with 95.8% positive predictive value, 74.2% sensitivity, and 80% specificity. Postnatal diagnoses in live-born fetuses range from anterior sacral meningocele to megacystis microcolon intestinal hypoperistaltism syndrome or vesicoureteral reflux with a completely good prognosis.

Conclusion: Although the etiology and prognosis are variable in megacystis cases diagnosed in the second trimester, the presence of oligo-anhydramnios and LBD/BPD ratio were found to be statistically significant poor prognostic markers. All prognostic markers need to be re-evaluated in a larger patient group.

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Transvaginal sonographic evaluation of cesarean section scar niche in pregnancy

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Objectives: To investigate the prevalence of Cesarean section (CS) scar niche during pregnancy assessed by transvaginal ultrasound imaging and to relate scar measurements, demographic and obstetric variables to the niche evolution and final pregnancy outcome.

Methods: In this prospective observational study, we used transvaginal sonography to examine the uterine scars of 122 women at 11 + 0 – 13 + 6, 18 + 0 – 20 + 6 and 32 + 0 – 35 + 6 weeks of gestation. A scar was defined as visible on pregnant status when the area of hypoechogenic myometrial discontinuity of the lower uterine segment was identified. The CS scar niche ("defect") was defined as an indentation at the site of the CS scar with a depth of at least 2 mm in the sagittal plane. We measured the hypoechogenic part of the CS niche in two dimensions, as myometrial thickness adjacent to the niche and the residual myometrial thickness (RMT). In the second and third trimesters of pregnancy, the full lower uterine segment (LUS) thickness and the myometrial layer thickness was measured at the thinnest part of the scar

area. Two independent examiners measured CS scars in a non-selected subset of patients (n = 24). Descriptive analysis was used to assess scar visibility, and the intraclass correlation coefficient (ICC) was calculated to show the strength of absolute agreement between two examiners for scar measurements. Factors associated with CS scar niche, including maternal age, BMI, smoking status, previous vaginal delivery, obstetrics complications, and a history of previous uterine curettage, were investigated. Clinical information about pregnancy outcomes and complications was obtained from the hospital's electronic medical database.

Results: The scar was visible in 77.9% of the women. From those with visible CS scar, the incidence of a CS scar niche was 51.6%. The intra- and interobserver agreements for CS scar niche measurements were excellent (ICC 0.98 and 0.89, respectively). Comparing subgroups of women with CS scar niche (n = 49) and no niche group (n = 73), there was no statistically significant correlation between maternal age (p = 0.486), BMI (p = 0.529), gestational diabetes (p = 1.000), smoking status (p = 0.662), previous vaginal delivery after CS (p = 1.000) and niche development. Uterine scar niches were seen in 56.3% (18/48) of the women who had undergone uterine curettage compared with 34.4% (31/74) without uterine curettage and no niche (p = 0.045). We didn't find a statistically significant correlation between the uterine scar niche at the first trimester of pregnancy and mode of delivery (p = 0.337). Furthermore, there were no significant differences in Apgar score after one (p = 0.506) and five (p = 0.951) minutes between CS scar niche and no niche scar group, as in neonatal weight (p = 0.340). Two cases (4.7%) of uterine scar dehiscence were confirmed following a trial of vaginal delivery.

Conclusions: Based on ultrasonography examination, CS scar niche remains visible in half of the cases with visible CS scar in the first trimester of pregnancy and can be reproducibly measured by the transvaginal scan. Previous uterine curettage is associated with an increased risk for uterine niche formation in a subsequent pregnancy. Uterine scar dehiscence might be potentially related to the CS scar niche.

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Neovagina creation in congenital vaginal agenesis: Mini-laparoscopic approach using indocyanine green fluorescence

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Introduction and aims of the study: Mayer–Rokitansky–Küster–Hauser syndrome (MRKHS) is a rare congenital syndrome with an estimated incidence of 1:5000 females, resulting in the congenital absence of the upper part of the vagina. There is still no standardized treatment for vaginal agenesis: surgical repair with a minimally invasive technique is a reasonable option, as it offers rapid results and a fast post-operative recovery. Our aim is to describe a surgical technique for neovagina creation through vaginal elongation using a mini-laparoscopic approach with indocyanine green (ICG)-imaging, and its respective results.

Methods: Retrospective study including all cases of vaginal agenesis in the context of MRKHS surgically corrected in our center since June 2019, through a mini-laparoscopic modified Vecchietti procedure with intraoperative ICG-fluorescence imaging.

Results: Between June 2019 and December 2022, twelve patients with MRKHS (mean age: 20years; mean pre-operative vaginal length: 2 cm) were submitted to a vaginal agenesis surgical repair using a mini-laparoscopic approach for placement of an external traction device that was daily adjusted until the creation of a neovagina (modified Vecchietti procedure). During the procedure, ICG-fluorescence was applied to allow for better anatomic recognition. Surgery was successfully completed in all patients, with removal of the traction device between the 5th and 8th post-operative day. This technique allowed for the creation of a neovagina in approximately one week; 6 weeks after surgery all patients had a 10,5–12 cm length, epithelized neovagina. Regarding complications, one patient had isolated fever nine days after surgery, that was controlled with empiric antibiotics.

Conclusions: This technique was able to create normal length neovaginas in one week, whose size was successfully kept after surgery, allowing for satisfactory sexual function. Therefore, the mini-laparoscopic modified Vecchietti approach using ICG-fluorescence appears to be a feasible and safe option in the treatment of vaginal agenesis, with rapid results and minor complications.

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Peripartum care of pregnancy complicated by sjogren syndrome

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A 32-year-old nullipara diagnosed with Sjogren syndrome was referred to the hospital outpatient clinic at 34 weeks, with suspicion of placenta previa. There was no history of vaginal bleeding during pregnancy, but the patient mentioned that she had positive anti-Ro, ANA2, SS-A and SS-B antibodies detected in laboratory test. She was under observation of atrio-ventricular heart block in repetitive ultrasound examinations. Although placenta previa was ruled out, she remained under close observation until 37 weeks. The antibodies count remained at similar level throughout the pregnancy. She received 200 mg of hydroxychloroquine as treatment of Sjogren syndrome. She denied any risk for the fetus regarding Sjogren syndrome during pregnancy. The patient was referred to the hospital's Pathology of Pregnancy Ward at 37 weeks, but she declined, each time demanding solid proof of health risk for the fetus in regard of Sjogren syndrome and labor induction. After numerous control visits in the hospital's outpatient clinic, at each she was referred to the hospital, she was admitted to the hospital at 38 weeks of gestation. At 38 + 6 weeks the patient was qualified for labor induction, to which she agreed. After less than 24 h of preinduction she presented with immense vaginal bleeding and cesarean section was performed. During the surgery, marginal placental separation was observed. She gave birth to a healthy boy of 2750 g. No neonatal lupus was observed, but still the resolve of the pregnancy gives some important clues on handling pregnancy complicated by Sjogren syndrome.

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Ultrasound evaluation of the fetal fat tissue, heart, liver and umbilical cord measurements in pregnancies complicated by gestational and type 1 diabetes mellitus – Potential application in the fetal birth-weight estimation and prediction of the fetal macrosomia

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Aim: The aim of the study was to evaluate the ultrasound-derived measurements of the fetal soft-tissue, heart, liver and umbilical cord in pregnancies complicated by gestational (GDM) and type 1 diabetes mellitus (T1DM), and to assess their applicability in the estimation of the fetal birth-weight (FBW) and prediction of fetal macrosomia.

Methods: Measurements were obtained from diet-controlled GDM (GDMG1) (n = 40), insulin-controlled GDM (GDMG2) (n = 40), T1DM (n = 24) and healthy control (n = 40) patients. The following parameters were selected for analysis: fetal sub-scapular fat mass (SSFM), abdominal fat mass (AFM), mid-thigh fat/lean mass (MTFM/MTLM) and inter-ventricular septum (IVS) thicknesses, heart and thorax circumference and area (HeC/HeA; ThC/ThA), liver length (LL), umbilical cord/vein/arteries circumference and area (UmC/UmA; UvC/UvA; UaC/UaA) together with total umbilical vessels (UveA) and Wharton's jelly area (WjA).

Results: Measurements of the fetal SSFM, AFM, MTFM, MTFM/MTLM ratio, HeC, HeA, IVS, LL, UmC, UmA, UaC, UaA, UveA and WjA were significantly increased among patients with GDMG2/T1DM as compared to GDMG1 and/or control groups ($p < .05$). The regression analysis revealed that maternal height as well as fetal biparietal diameter, abdominal circumference (AC), AFM and LL measurements were independent predictors of the FBW ($p < .05$). In addition, increase in the fetal AFM, AC and femur length (FL) was associated with a significant risk of fetal macrosomia occurrence ($p < .05$). The equation developed for the FBW estimation provided significantly lower mean absolute percent error than standard formula in the sub-group of women with T1DM (5.7% vs 9.4%, $p < .05$). Moreover, new equation yielded sensitivity of 93.8%, specificity 77.7%, positive predictive value 54.5% and negative predictive value of 97.8% in the prediction of fetal macrosomia.

Conclusions: Ultrasound measurements of the fetal soft tissue, heart, liver and umbilical cord are significantly increased among women with GDMG2 and T1DM and may find application in the management of diabetes-complicated pregnancies.

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Flash glucose monitoring in gestational diabetes mellitus (flamingo): A randomised controlled trial

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Aims: Gestational diabetes mellitus (GDM) is the most common type of hyperglycaemia in pregnancy. GDM is a risk factor of adverse perinatal outcomes, with the incidence rate increasing proportionally to the level of maternal dysglycaemia. Therefore, glycaemic control plays an important role in management of GDM. The aim of this study was to assess the efficacy of flash glucose monitoring (FGM) in GDM.

Materials and methods: This was a cross-over, non-blinded, randomised controlled trial, that recruited 100 pregnant women diagnosed with GDM between 24 and 28 weeks of gestation at the 1st Department of Obstetrics and Gynaecology, Medical University of Warsaw. After meeting the inclusion criteria patients were randomly allocated to the study group (FGM, n = 50) or control group (self-monitoring of blood glucose – SMBG, n = 50). Clinical and laboratory results were assessed at four follow-up visits. The primary outcome was mean fasting and postprandial glycaemia. The secondary outcomes were perinatal outcomes.

Results: Compared to the control group, the study group significantly reduced their fasting ($p = 0.027$) and postprandial glycaemia ($p = 0.034$) during the first 4 weeks following GDM diagnosis; there was no significant difference in qualification to insulin therapy (OR 1.09, 95%CI 0.47 – 2.57). Incidence of fetal macrosomia was significantly higher in SMBG as compared to FGM group (OR 5.63, 95%CI 1.16 – 27.22); neonatal hypoglycaemia also appeared more often in the control group (20% vs. 8.16%), but the differences was not statistically significant (OR 1.29, 95% CI 0.50 – 3.28). Between 34-36 weeks of gestation the study group had higher Eating Assessment Test (EAT) score compared to the control group ($p = 0.017$).

Conclusions: Study results indicate that FGM improves glycaemic control, decreases incidence of fetal macrosomia and might have an impact on dietary habits in patients with GDM.

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The impact of gestational weight gain (GWG) in obese women with gestational diabetes mellitus (GDM)

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GDM is defined as any degree of glucose intolerance with onset during pregnancy. It is associated with maternal/neonatal complications. Women with pre-pregnancy body mass index (BMI) are classified as underweight ($<18.5 kg/m^2$), normal weight ($18.5–24.9 kg/m^2$); overweight ($25–29.9 kg/m^2$), and obese ($\geq 30 kg/m^2$). The recommended GWG in the 2009 Institute of Medicine (IOM) guidelines is 5–9 kg for obese. The study aimed to analyze the neonatal/obstetric outcomes of obese women with GDM and the impact of GWG.

Retrospective study of women with GDM surveilled at CHTV from January 2016 to December 2021. Data was collected from clinical records. Statistical analysis was made using $\chi 2$ test, Odds Ratio (OR), and t-test. p-value < 0.05 was considered statistically significant.

1051 women with GDM had surveillance during the study period. According to pre-pregnancy BMI: 2.6% underweight; 42.7% normal weight; 28.2% overweight; and 26.5% obese. Comparing normal BMI and obese, obese women had a higher risk of macrosomia (OR = 1.95, $p < 0.05$); neonatal morbidity (OR = 1.61, $p < 0.05$); and cesarean delivery (OR = 2.5, $p < 0.05$). In the obese group: 11.8% lost weight; 2.9% maintain weight; 24% increased < 5Kg; 26.2% follow IOM guidelines (5-9Kg); 35.1% showed excessive GWG (>9Kg). Comparing obese with excessive GWG and obese that followed IOM guidelines, the excessive GWG had a 1.37x higher risk of neonatal morbidity (not statistically

significant) and 2x higher risk of cesarean delivery (p = 0.03). The macrosomia was not related to the excessive GWG in obese women (p < 0.001). The risk of neonatal morbidity and cesarean delivery for obese with GWG below IOM guidelines, compared with obese that followed guidelines, was not statistically significant.

Obese with GDM had more risk of macrosomia, neonatal morbidity, and cesarean delivery. The risk of cesarean delivery is even higher in obese with excessive GWG.

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Linzagolix provides rapid, significant reduction of heavy menstrual bleeding in women with uterine fibroids

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Introduction and aims of the study: Linzagolix (LGX), a new oral gonadotropin-releasing hormone (GnRH) antagonist, was assessed in women with heavy menstrual bleeding (HMB; > 80 mL menstrual blood loss [MBL]/cycle) due to uterine fibroids in two placebo-controlled Phase 3 trials, PRIMROSE 1 and 2.

Methods: 1012 women were treated with LGX100mg, LGX100mg plus add-back-therapy (ABT; estradiol E2:1 mg/norethisterone acetate NETA:0.5 mg), LGX200mg or LGX200 mg + ABT for up to 52 weeks. The primary efficacy endpoint was a reduction in alkaline-hematin-documented MBL to ≤ 80mL and reduction of ≥50% at 24 weeks. Time to reduced MBL was assessed as secondary endpoint.

Results and/or discussion: The mean baseline MBL was 208mL. There was a rapid reduction in MBL within days of initiating therapy with significant reductions at 24 weeks in all active groups. The responder rate on LGX100mg, LGX100 mg + ABT, LGX200 mg or LGX200 mg + ABT was 57%, 72%, 75% and 85%, respectively compared to 32% on placebo (p < 0.001). Amenorrhea was achieved in 36%, 52%, 65% and 69%, respectively compared to 17% on placebo (p < 0.001). The reduction in MBL was maintained over time until 52 weeks. The time to reduced MBL was significantly shorter in all active treatment groups compared to placebo, with median Kaplan-Meyer estimates (estimating the length of time until occurrence of the event in 50% of subjects) of 135 days (d), 12d, 3d and 3d for the respective active groups (p < 0.001). Linzagolix was well tolerated during this time.

Conclusions: Once daily doses of new oral GnRH antagonist - linzagolix 100mg and 200mg with or without ABT provide fast and efficient bleeding control in women with HMB due to uterine fibroids. Improvements are maintained with prolongation of treatment. This particularly rapid onset of action is an appreciated treatment feature that might be importance in selected patients.

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Risk factors and management proposal of an emerging pathology: Uterine enhanced myometrial vascularity/arteriovenous malformations (EMV-MAV)

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Introduction and aims of the study: Acquired EMV-MAV are rare, abnormal communication between the branches of the uterine artery and the venous plexuses within the myometrium that may cause life-threatening hemorrhage. The aim of our research was to define risk factors associated with the occurrence of EMV-MAV in women with early pregnancy loss or retained products of conception and to assess whether EMV-MAVs requiring embolization was associated with different features than those that spontaneously regressed.

Methods: A retrospective study was designed to evaluate 252 patients with ultrasound diagnosis of EMV-MAV post-abortion or childbirth. EMV-MAVs were categorized by ultrasound according to size and flow velocity (peak systolic velocity – PSV max). Demographic data, medical history and clinical course of the condition were collected for each patient.

Results and/or discussion: 201 patients had spontaneous resolution, 37 underwent uterine arteries embolization (UAE). A statistically significant association between UAE and previous history of operative hysteroscopy (p-value = 0.019), major bleeding (p-value < 0.001), blood transfusions (p-value < .001), minimum hemoglobin value (p < 0.001), surgical treatment of abortion (p-value = 0.003) was found. Moreover, data confirm that UAE was preferred in case of PSV max > 83 cm/s, while “wait-and-see” management if PSV max < 39 cm/s (p < 0.001).

Conclusions: A 8-parameter-score (previous history of operative hysteroscopy; metrorrhagia; pain; surgical treatment of abortion; transfusions; other endouterine pathology; minimum hemoglobin value; PSV max) was identified to manage EMV-MAV. In presence of major bleeding (mandatory parameter) and score ≥7, UAE should be preferred; otherwise, with a SCORE ≤3, it’s reasonable to adopt a “wait-and-see” conduct.

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