Abstracts

Duration of the active first stage of labour and severe perineal lacerations and maternal postpartum complications: a population-based cohort study;

Lisa Kogner; Louise Lundborg; Xingrong Lin et.al; Department of Women's Health, Division of Obstetrics, Karolinska University Hospital, Stockholm; Swede25 September 2023

Objective: The impact of first stage labour duration on maternal outcomes is sparsely investigated. We aimed to study the association between a longer active first stage and maternal complications in the early postpartum period.

Design: A population-based cohort study.

Setting: Regions of Stockholm and Gotland, Sweden, 2008–2020.

Population: A cohort of 159 459 term, singleton, vertex pregnancies, stratified by parity groups.

Methods: The exposure was active first stage duration, categorised in percentiles. Poisson regression analysis was performed to estimate the adjusted relative risk (aRR) and the 95% confidence interval (95% CI). To investigate the effect of second stage duration on the outcome, mediation analysis was performed.

Main outcome measures: Severe perineal lacerations (third or fourth degree), post- partum infection, urinary retention and haematoma in the birth canal or ruptured sutures.

Results: The risks of severe perineal laceration, postpartum infection and urinary retention increased with a longer active first stage, both overall and stratified by par- ity group. The aRR increased with a longer active first stage, using duration of <50th percentile as the reference. In the e"90th percentile category, the aRR for postpartum infection was 1.64 (95% CI 1.46–1.84) in primiparous women, 2.43 (95% CI 1.98–2.98) in parous women with no previous caesarean delivery (CD) and 2.33 (95% CI 1.65–3.28) in parous women with a previous CD. The proportion mediated by second stage duration was 33.4% to 36.9% for the different outcomes in primiparous women. The risk of haematoma or ruptured sutures did not increased with a longer active first stage. **Conclusions:** Increasing active first stage duration is associated with maternal complications in the early postpartum period.

Timing of antenatal corticosteroids and survival without neurologic disabilities at 5½ years in children born before 35 weeks of gestation

Claire Guerini MD a b, François Goffinet MD, PhD

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Objective: This study aimed to assess the impact of antenatal corticosteroid timing on survival without moderate or severe neurologic disabilities at 5½ years.

Study Design: This was a secondary analysis of the EPIPAGE-2 study, a national population-based cohort (France) that recruited neonates in 2011 and followed them up at 5½ years (results first reported in 2021). Participants were children born alive between 24+0 and 34+6 weeks, with a complete corticosteroid course, delivery >48 hours after the first injection, and neither limitation of care decided before birth nor severe congenital malformation. The study included 2613 children, 2427 of whom were alive at 5½ years; 71.9% (1739/2427) had a neurologic assessment at this age; 1537 had a clinical examination (complete for 1532), and 202 were assessed with a postal questionnaire. Exposure was defined as the interval between the first injection of the last antenatal corticosteroid course and delivery in days, studied in 2 categories (days 3–7 and after day 7), in 4 categories (days 3–7, 8–14, 15–21, and after day 21), and continuously in days. The main outcome was survival at 5½ years without moderate/severe neurologic disabilities, defined as moderate/severe cerebral palsy, or unilateral or bilateral blindness or deafness, or Full-Scale Intelligence Quotient 2 standard deviations below the mean. A multivariate analysis with a generalized estimated equation logistic regression model assessed the statistical association between the main outcomes and the interval from the first corticosteroid injection of the last course to birth. Multivariate

analyses were adjusted for potential confounders, defined with a directed acyclic graph: gestational age in days, number of corticosteroid courses, multiple pregnancy, and cause of prematurity in 5 categories. Because neurologic follow-up was complete in only 63.2% of cases (1532/2427), the analyses used imputed data.

Results: Among 2613 children, 186 died between birth and 5½ years. Overall survival was 96.6% (95% confidence interval, 95.9–97.0), and survival without moderate or severe neurologic disabilities was 86.0% (95% confidence interval, 84.7–87.0). Survival without moderate or severe neurologic disabilities was lower after day 7 (85.0%) than during the interval from day 3 to day 7 (87.0%) (adjusted odds ratio, 0.70; 95% confidence interval, 0.54–0.89);

Conclusion: The association of a >7-day interval between antenatal corticosteroid administration and birth with a lower rate of survival without moderate or severe neurologic disabilities among children aged 5½ years emphasizes the importance of better targeting women at risk of preterm delivery to optimize the timing and thus benefits of treatment.

Placental growth factor testing at 19–23 weeks of gestation as a guide to subsequent care in pregnancy: A prospective observational study

Argyro Syngelaki; Ranjit Akolekar; Peter von Dadelszen; Kypros H. Nicolaide; 18 September 2023

Objective: To determine whether serum placental growth factor (PlGF) at 19–23 weeks of gestation can improve the identification of risk for adverse outcomes.

Design: Prospective observational cohort study.

Setting: Two English maternity units. **Population:** Unselected singleton pregnancies attending routine ultrasound at 19–23 weeks of gestation.

Methods: Outcomes ascertained by health record review. Diagnostic test properties evaluated clinical risk factors for pre-eclampsia (according to National Institute of Care Excellence) or fetal growth restriction (according to Royal College of Obstetricians and Gynaecologists), low PlGF at 19–23 weeks of gestation (<5th percentile) or both.

Main outcome measures: Pre-eclampsia, gestational hypertension, stillbirth, birth- weight below third percentile or neonatal intensive care unit (NICU) admission for e”48 h.

Results: In 30 013 pregnancies, risk factors were present in 9941 (33.1%), low PlGF was present in 1501 (5.0%) and both (‘two-stage’ screening) were present in 547 (1.8%) pregnancies. Risk factors detected 41.7%–54.7% of adverse outcomes, and could not meaningfully revise the risk (all positive likelihood ratios, +LR, <5.0; all negative like- lihood ratios, “LR, e”0.2). Low PlGF detected 8.5%–17.4% of adverse outcomes, but meaningfully increased risks (other than NICU admission) associated with delivery <37 weeks of gestation (+LR = 5.03–15.55); all “LRs were e”0.2. ‘Two-stage’ screen- ing detected 4.2%–8.9% of adverse outcomes, with meaningful +LRs (6.28–18.61) at <37 weeks of gestation, except for NICU admission of e”48 h, which had an +LR of 7.56 at <34 weeks of gestation; all “LRs were e”0.2. No screening strategy meaningfully increased or decreased the detection of adverse outcome risk at term. **Conclusions:** Clinical risk factor screening has a high screen-positive rate and a poor detection of adverse outcomes. False positives cannot be reduced by PlGF testing at 19–23 weeks of gestation; therefore, this cannot be recommended as a useful strategy on its own.

Vaginal micronised progesterone for the prevention of hypertensive disorders of pregnancy: A systematic review and meta-analysis

Pedro Melo;Adam Devall;Andrew H. Shennan;Manu Vatish;Christian M. Becker;Ingrid Granne; 20 October 2023

Background: Treatment with vaginal progesterone reduces the risk of miscarriage and preterm birth in selected high-risk women. The hypothesis that vaginal progesterone can reduce the risk of hypertensive disorders of pregnancy (HDP) is unexplored.

Objectives: To summarise the evidence on the effectiveness of vaginal progesterone to reduce the risk of HDP.

Search strategy: We searched Embase (OVID), MEDLINE (OVID), PubMed, CENTRAL and clinicaltrials.gov from inception until 20 June 2023.

Selection criteria: We included placebo-controlled randomised trials (RCTs) of vag-inal progesterone for the prevention or treatment of any pregnancy complications.

Data collection and analysis: We extracted absolute event numbers for HDP and pre-eclampsia in women receiving vaginal progesterone or placebo, and meta-ana-lysed the data with a random effects model. We appraised the certainty of the evidence using GRADE methodology.

Main results: The quantitative synthesis included 11 RCTs, of which three initiated vaginal progesterone in the first trimester, and eight in the second or third trimesters. Vaginal progesterone started in the first trimester of pregnancy lowered the risk of any HDP (risk ratio [RR] 0.71, 95% confidence interval [CI] 0.53–0.93, 2 RCTs, n = 4431 women, I2 = 0%; moderate-certainty evidence) and pre-eclampsia (RR 0.61, 95% CI 0.41–0.92, 3 RCTs, n = 5267 women, I2 = 0%; moderate-certainty evidence) when compared with placebo. Vaginal progesterone started in the second or third trimesters was not associated with a reduction in HDP (RR 1.19, 95% CI 0.67–2.12, 3 RCTs, n = 1602 women, I2 = 9%; low-certainty evidence) or pre-eclampsia (RR 0.97, 95% CI 0.71–1.31, 5 RCTs, n = 4274 women, I2 = 0%; low-certainty evidence).

Conclusions: Our systematic review found first-trimester initiated vaginal micron-ised progesterone may reduce the risk of HDP and pre-eclampsia.

Laparoscopic and hysteroscopic findings in women with sub-fertility and tuberculosis: A case series

Rana Mondal; Neha Jaiswal;et.al; Department of Obstetrics and Gynaecology, NRS Medical College and Hospital, Kolkata, India; 17 October 2023

Objective: Evaluation of hysteroscopic and laparoscopic findings in subfertile women predictive of tuberculosis.

Design: Retrospective case series analysis.

Setting: Tertiary hospital in India. **Population:** A retrospective analysis of 16 784 subfertile women who had undergone diagnostic hysterolaparoscopy (DHL) was conducted between February 2014 and June 2021.

Methods: Histopathological evidence, acid-fast bacilli (AFB), culture and GeneXpert MTB/RIF assay were used to diagnose female genital tuberculosis (FGTB). Various hysteroscopic and laparoscopic findings were analysed, and a binary logistic regression assessed associations between these findings and positive diagnostic outcomes.

Main outcome measures: Various hysteroscopic and laparoscopic findings correspond to tubercular manifestation.

Results: Of the 16,784 patients, 1083 had hysteroscopy and laparoscopy findings suggestive of tuberculosis, and 309 were diagnosed with FGTB based on diagnostic tests. Logistic regression identified variables strongly predictive of positive status outcomes; tuberculous abdomino-pelvic adhesions of various grades, isthmo-amp- ullary block, tubercle, tuboovarian mass, tuberculous hydrosalpinx, complete tubal destruction, tubal diverticula and rigid tube emerged as strong predictors. **Conclusions:** Logistic regression-derived predictors, alongside specific laparoscopic and hysteroscopic findings, can enhance diagnostic accuracy and clinical decision- making to start antitubercular therapy in subfertile women.

A randomized trial comparing the 52-mg levonorgestrel system with combination oral contraceptives for treatment of heavy menstrual bleeding

Kristen A. Matteson, MD, MPH; Josie Valcin, MD; Christina A. Raker, ScD; Melissa A. Clark, PhD; Published:August 01, 2023DOI:https://doi.org/10.1016/j.ajog.2023.07.049

Background: The levonorgestrel intrauterine system and combined oral contraceptives are the 2 most commonly used nonsurgical treatments for heavy menstrual bleeding in the United States. However, there are limited data on their relative effectiveness and on their impact on bleeding-specific quality of life.

Objective: This study aimed to compare the effectiveness of the 52-mg levonorgestrel intrauterine system with that of combined oral contraceptives for improving quality of life among individuals who self-report heavy menstrual bleeding. We hypothesized that the levonorgestrel intrauterine system would be more effective than combined oral contraceptives at 6 and 12 months after treatment.

Study Design: We conducted a pragmatic randomized trial of individuals who self-reported heavy menstrual

bleeding. Individuals were eligible if they did not have contraindications to either the levonorgestrel intrauterine system or combined oral contraceptives and were determined to have a nonstructural cause of heavy menstrual bleeding. Eligible and consenting participants were randomly assigned in a 1:1 ratio to receive a 52-mg levonorgestrel intrauterine system or a monophasic 30- or 35-ìg ethinyl estradiol–containing combined oral contraceptive. The main outcome was mean change in bleeding-related quality of life, measured by the 20-question Menstrual Bleeding Questionnaire (score range, 0–75) at 6 and 12 months. Differences in group means and confidence intervals for the Menstrual Bleeding Questionnaire score were computed by multivariable linear mixed-effects regression; 24 participants per group were needed to detect a 10-point difference in change in mean Menstrual Bleeding Questionnaire score between individuals treated with the levonorgestrel intrauterine system and those treated with combined oral contraceptives at each follow-up time point.

Results; A total of 62 individuals were randomly assigned to treatment (n=29 allocated to levonorgestrel intrauterine system and n=33 allocated to combined oral contraceptives) and included in the intention-to-treat analyses; 19 of 29 received the levonorgestrel intrauterine system and 31 of 33 received combined oral contraceptives. Eleven percent identified as Black or African American and 44% identified as Hispanic or Latina. Participant characteristics were similar among study groups. Bleeding-related quality of life increased in both study arms, as reflected by a significant decrease in Menstrual Bleeding Questionnaire scores beginning at 6-week follow-up. In the main intention-to-treat analyses (n=62), there were no differences in mean change in Menstrual Bleeding Questionnaire scores at 6 months (difference=”2.5; 95% confidence interval, ”10.0 to +5.0) or 12 months (difference=”1.1; 95% confidence interval, ”8.7 to +6.5). Findings were similar in the subsets of participants with any follow-up visits (n=52) and who completed all follow-up visits (n=42). In the per-protocol analyses (n=47), a significantly greater decrease in Menstrual Bleeding Questionnaire score was observed in the levonorgestrel intrauterine system arm at 6 months after treatment (difference=”7.0; 95% confidence interval, ”13.8 to ”0.2) but not at 12 months (difference=”4.8; 95% confidence interval, ”11.8 to 2.3) compared with the combined oral contraceptive arm.

Conclusion: No differences in change of bleeding-related quality of life were observed between the levonorgestrel intrauterine system and combined oral contraceptives at 6 or 12 months. Patients should be counseled that the levonorgestrel intrauterine system and combined oral contraceptives are both effective options for improving bleeding-related quality of life.

Predictors of response for elagolix with add-back therapy in women with heavy menstrual bleeding associated with uterine fibroids

Ayman Al-Hendy, MD, PhD; Linda Bradley, MD;Charlotte D. Owens, July 20, 2020DOI:https://doi.org/10.1016/j.ajog.2020.07.032

Background: Uterine fibroids are one of the most common neoplasms found among women globally, with a prevalence of approximately 11 million women in the United States alone. The morbidity of this common disease is significant because it is the leading cause of hysterectomy and causes significant functional impairment for women of reproductive age. Factors including age, body mass index, race, ethnicity, menstrual blood loss, fibroid location, and uterine and fibroid volume influence the incidence of fibroids and severity of symptoms. Elagolix is an oral gonadotropin-releasing hormone receptor antagonist that competitively inhibits pituitary gonadotropin-releasing hormone receptor activity and suppresses the release of gonadotropins from the pituitary gland, resulting in dose-dependent suppression of ovarian sex hormones, follicular growth, and ovulation. In Elaris Uterine Fibroids 1 and Uterine Fibroids 2, 2 replicate multicenter, double-blind, randomized, placebo-controlled, phase 3 studies, treatment of premenopausal women with elagolix with hormonal add-back therapy demonstrated reduction in heavy menstrual bleeding associated with uterine fibroids.

Objective: This analysis aimed to evaluate the safety and efficacy of elagolix (300 mg twice a day) with add-back therapy (1 mg estradiol/0.5 mg norethindrone acetate once a day) in reducing heavy menstrual bleeding associated with uterine fibroids in various subgroups of women over 6 months of treatment.

Study Design: Data were pooled from Elaris Uterine Fibroid-1 and Uterine Fibroid-2 studies, which evaluated premenopausal women (18–51 years) with heavy menstrual bleeding (>80 mL menstrual blood loss per cycle, alkaline hematin methodology) and ultrasound-confirmed uterine fibroid diagnosis. Subgroups analyzed included age, body mass index, race, ethnicity, baseline menstrual blood loss, fibroid location, and uterine and primary fibroid volume (largest

fibroid identified by ultrasound). The primary endpoint was the proportion of women with <80 mL menstrual blood loss during the final month and e”50% menstrual blood loss reduction from baseline to final month. Secondary and other efficacy endpoints included mean change in menstrual blood loss from baseline to final month, amenorrhea, symptom severity, and health-related quality of life. Adverse events and other safety endpoints were monitored. Results: The overall pooled Elaris Uterine Fibroid-1 and Uterine Fibroid-2 population was typical of women with fibroids, with a mean age of 42.4 (standard deviation, 5.4) years and a mean body mass index of 33.6 (standard deviation, 7.3) kg/m2 and 67.6% of participants being black or African American women. A wide range of baseline uterine and fibroid volumes and menstrual blood loss were also represented in the overall pooled study population. In all subgroups, the proportion of responders to the primary endpoint, mean change in menstrual blood loss, amenorrhea, reduction in symptom severity, and improvement in health-related quality of life were clinically meaningfully greater for women who received elagolix with add-back therapy than those who received placebo and consistent with the overall pooled study population for the primary endpoint (72.2% vs 9.3%), mean change in menstrual blood loss (“172.5 mL vs ”0.8 mL), amenorrhea (50.4% vs 4.5%), symptom severity (“37.1 vs ”9.2), and health-related quality of life score (39.9 vs 8.9). Adverse events by subgroup were consistent with the overall pooled study population. Conclusion: Elagolix with hormonal add-back therapy was effective in reducing heavy menstrual bleeding associated with uterine fibroids independent of age, body mass index, race, ethnicity, baseline menstrual blood loss, fibroid location, and uterine and primary fibroid volume.

PALM-COEIN Classification for Abnormal Uterine Bleeding: A Study of its Practical Applicability and Distribution of Causes

Zalak Vinaybhai Karena1 , Aditya Dharmesh Mehta2, Sanjay Vikani3 Received on: 16 May 2022; Accepted on: 29 June 2022; Published on: 31 January 2023

Aim: The aim was to study the distribution of causes in non-gravid women of reproductive age-group having abnormal uterine bleeding (AUB) as per the new International Federation of Gynecology and Obstetrics (FIGO) polyp; adenomyosis; leiomyoma; malignancy and hyperplasia; coagulopathy; ovulatory dysfunction; endometrial; iatrogenic; and not yet classified—(PALM-COEIN) classification system and to evaluate the practical applicability of this classification system in the clinical scenario.

Materials and methods: A prospective cross-sectional study was conducted among 300 women with AUB attending the outpatient department of gynecology, selected by the kth random sampling technique. The etiological diagnosis was made in the PALM-COEIN spectrum. The practical applicability of the AUB-FIGO classification system was assessed by the survey of clinicians with help of a scoring system.

Results: The majority of the study subjects were from 40 to 55 years age group with the median age of the study subjects being 42 years. Fifty-two subjects had two attributable causes from PALM-COEIN for AUB. In our study, 45% of subjects had leiomyoma, which turned out to be the most common etiology for AUB, and hypothyroidism was the most common endocrinopathy associated with 10% of AUB cases. Hysteroscopy was required to diagnose one case of amenorrhea. The clinician survey emphasized the high practical applicability of PALMCOEIN classification.

Conclusion: The data generated from the clinical settings with this classification could be more comparable due to homogeneity and consistency in nomenclature. Clinical significance: The International Federation of Gynecology and Obstetrics classification for AUB is a clinician-friendly modality providing an easy algorithm for accurate diagnosis and definitive treatment of AUB. Keywords: Abnormal uterine bleeding, FIGO, Heavy menstrual bleeding, PALM-COEIN, Practical applicability, Qualitative survey, Reproductive age group. Journal of South Asian Federation of Obstetrics and Gynaecology (2022): 10.5005/jp-journals-10006-2154