Abstracts

Evaluation of place of early diagnostic laparoscopy and hysteroscopy in female infertility - right approach at right time for improved outcome

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The New Indian Journal of OBGYN. 10(2):402-407

Aim: To assess impact of early diagnostic laparoscopy and hysteroscopy in cases of primary and secondary infertility on fertility outcome.

Methodology: This was a prospective study conducted in the Department of Obstetrics & Gynaecology at KGMU, 175 cases of primary and secondary infertility evaluated by hysteroscopy and laparoscopy, from January 2018 to December 2018 were enrolled. Thorough history and examination were done. Any positive findings per laparoscopy and hysteroscopy and any therapeutic intervention done noted.

Results: Out of the total 175 cases of infertility 110 (62.8%) were of primary infertility, 65 (37.14%) were of secondary infertility. Majority patients of primary infertility were of age 25-30 years and secondary infertility were of age 30-35 years. In primary infertility group abnormal findings during laparoscopy seen in 71 cases out of 110 cases whereas 9 had abnormal findings per hysteroscopy. In secondary infertility group out of 65 patients 29 patients had abnormal findings per laparoscopy and 15 patients had abnormal hysteroscopic findings. Ovarian drilling done in 4 cases of primary infertility while others required cystectomy, adhesiolysis, tubal clipping for hydrosalpinx. In secondary infertility group 5 had ovarian cystectomy and 4 underwent adhesiolysis whereas only one case required ovarian drilling. Hysteroscopic procedures done in cases of primary infertility, polypectomy in 6 cases followed by septal resection, adhesiolysis and tubal cannulation whereas in secondary infertility majority required adhesiolysis followed by other procedures. Post laparoscopy and hysteroscopy 87 patients given ovulation induction with IUI, 80 cases were explained for timed intercourse and 8 patients were taken up for IVF. Follow-up of these cases in first six months showed 4 cases of primary infertility had spontaneous conception, 2 conceived on IUI whereas in cases with secondary infertility 5 cases conceived on ovulation induction and IUI.

Conclusion: Laparoscopy and hysteroscopy integrated together are beneficial technique for complete evaluation of female factors of infertility patient and should be used initial work up in cases of infertility without delay.

Histopathological study of endometrium in abnormal uterine bleeding with expression of oestrogen and progesterone receptors

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The New Indian Journal of OBGYN. 10(2):274-280

Background: Abnormal uterine bleeding (AUB) is a common gynaecological condition. Studies show that there is altered expression of oestrogen receptors (ER) and progesterone receptors (PR) in the endometrium which may have a role in the aetiology of abnormal bleeding.

Objectives: To study the histopathological findings of endometrium and expression of oestrogen and progesterone receptors in the endometrium in patients with AUB. Materials and methods: A total of 63 endometrial biopsies were examined after obtaining ethical clearance from November 2018 to December 2019. After histopathological examination, all the cases were subjected to immunohistochemistry for ER and PR and were scored by Allred scoring system. Results: Majority of the patients were in the age group 41- 50 years and presented with heavy menstrual bleeding. Maximum number of cases were of endometrial hyperplasia (EH) without atypia (63%) followed by proliferative endometrium (21%), disordered proliferative endometrium (11%) and secretory endometrium (5%). Mean Allred score in AUB patients for ER expression in glands and stroma was significantly more than mean score for PR expression (glands – 7.3±1.5 vs 6.7 ± 1.8, p=0.00; stroma – 6.2±1.3 vs 5.8±1.6, p=0.00). ER expression in endometrial glands and stroma across various histologic patterns of AUB was higher than PR and this difference was significant in EH without atypia (7.2±1.8 vs 6.6±2, p=0.001; stroma – 6.2±1.16 vs 5.7±1.8, p=0.001). However, in other histological patterns, even though ER expression was higher than PR expression, test of significance could not be applied because of a smaller number of cases.

Conclusion: Increased expression of ER was observed compared to PR in all histological patterns in patients with AUB. ER expression was significantly more in cases of endometrial hyperplasia without atypia indicating they may have a role in etiopathogenesis of endometrial hyperplasia.

A prospective study on the colour doppler indices of follicular and endometrial blood flow as a predictor of pregnancy in intrauterine insemination (IUI) cycles

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Objectives: Success rates of intrauterine insemination (IUI) as first-line treatment for subfertile couples depend on various factors including follicular and endometrial blood flow and thickness. This study aimed to evaluate the color doppler indices of endometrial and follicular blood flow to predict pregnancy in IUI cycles.

Methods: A prospective observational study was done on 100 infertile women (21-35 years age) who underwent IUI cycles. On the day when trigger was planned, patients underwent color doppler study of follicular and endometrial flow by 2D ultrasound. Parameters such as endometrial thickness and endometrial blood flow, follicular vascularity grading, pulsatility index (PI) and the resistance index (RI) of uterine and ovarian arteries were calculated. The association of these factors with pregnancy outcomes was evaluated.

Results: Out of 100 women, 84% of women were nonpregnant, 14% got pregnant with live intrauterine pregnancy (LIUP), and 2% had poor outcome. Among the clinical characteristics, number of follicles was significantly associated with pregnancy outcomes (p<0.0001). Mean values of uterine artery PI, uterine artery RI, intraovarian artery (IOA) PI, and IOA RI were 3.27 ± 1.63, 0.88 ± 0.09, 1.92 ± 1.94, and 0.74 ± 0.69, respectively. Follicular vascularity grading was grade 1 and 2 in 50% of the total patients (mention in pregnant women). Uterine artery pulsatility index (p=0.021), follicular vascularity grading (P<.0001), and IOA PI (P<.0001) showed significant association with pregnancy outcomes. ROC curves showed that IOA PI was the best predictor of clinical pregnancy.

Conclusion: Color doppler flow study of uterus and ovary at the time of trigger in IUI cycles are good predictors of successful IUI outcome.

Epidemiology and management of uterine fibroids

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Uterine leiomyomas are one of the most common and yet understudied diseases in women. These tumors, commonly known as fibroids, affect women mainly during their reproductive years and are diagnosed in up to 70% of white women and more than 80% of women of African ancestry during their lifetime. This disease has a profound impact on health care delivery and costs worldwide. Though most women with fibroids are asymptomatic, approximately 30% of them will present with severe symptoms which can include abnormal uterine bleeding, anemia, pelvic pain and pressure, back pain, urinary frequency, constipation, or infertility, and will require intervention. Furthermore, fibroids have been associated with poor obstetrical outcomes. The current options for symptomatic fibroid treatment include expectant, medical, and surgical management, and interventional radiology procedures. This article reviews the recent progress and available management strategies for uterine fibroids and highlights areas where further research is needed to find new therapeutic targets and better personalize treatments.

Keywords: Abnormal uterine bleeding; Leiomyomas; Uterine fibroids.

Efficacy of intravenous infusion of paracetamol as an intrapartum labour analgesia

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Aim: To evaluate the efficacy of an intravenous infusion of 1000 mg of paracetamol as intrapartum labour analgesic.

Methodology: This was a prospective study carried out in department of Obstetrics and Gynaecology in SMGS Hospital, Government Medical College, Jammu

for a period of one year during 2019-2020 on 200 antenatal mother in active labour, after receiving the ethical clearance and written consent. The first 100 patients fulfilling the inclusion standards had been recruited into the study. Women had been then randomised to obtain both intravenous one thousand mg (1000mg) of Paracetamol (Group A, n=100) or intravenous injection of sterile water (Group B, n=100). Both the groups had been observed and compared for time of onset of analgesia, pain intensity was recorded by using Mc Gills scale before, one and three hours after drug administration, duration of labour, maternal cardiorespiratory parameters, mode of delivery, fetal Apgar scores, neonatal outcome and side effects of drugs.

Results: No difference in pain intensity was visible earlier than drug administration. There was significant pain reduction in paracetamol group after 1 and 3 hour of drug administration (p<0.001) when compared to placebo. Total duration of labour from enrolment in study to delivery in the paracetamol group changed was 259.97 (4 hrs18 mins) ± 14.47 minutes and in the placebo group it was 461 minutes (7 hrs 68 mins) ± 66.01 mins suggested that total labour duration was shortened in paracetamol group compared to placebo. Maternal complications like nausea, vomiting was not significant in both groups. APGAR scores in both groups had been satisfactory.

Conclusion: Intravenous paracetamol was an efficacious non-opioid drug for relieving labour pain without any significant maternal and foetal adverse effects.

Role of admission cardiotocography in predicting pregnancy outcome in postdated pregnancies

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The New Indian Journal of OBGYN. 10(2):334-338

Background: Admission cardiotocography (CTG) comprises recording of foetal heart rate and uterine contractions for 20 minutes done at the time of admission to labour room. This test can identify foetuses who are compromised during early labour and are in need for continuous foetal monitoring.

Aim: To evaluate the role of admission cardiotocography in predicting the pregnancy outcome in post-dated pregnancies.

Methodology: This study was a hospital based cross-sectional study conducted in the department of obstetrics and gynaecology, Jorhat Medical College and Hospital from July 2021 to June 2022. Admission cardiotocography was done in 90 post-dated pregnant women with singleton pregnancies admitted in labour room.

Results: The admission CTG was normal in 70 % of all patients, suspicious in 10% and pathological in 20 %. The neonatal outcomes in term of foetal distress, meconium stained liquor and NICU admissions were considerably higher in patients with pathological result. The sensitivity of test was 81.4% and specificity was 92%.

Conclusion: Admission CTG is a simple, useful screening test and serves as a non-invasive tool in forecasting the adverse foetal outcomes in high risk pregnancies.

Fetomaternal outcome of pregnancy with hemoglobinopathy

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The New Indian Journal of OBGYN. 10(2):388-395

Objectives: The objectives of this study are to determine the obstetric and neonatal outcome in pregnancy with hemoglobinopathy.

Methods and materials: A prospective observational study to evaluate maternal and neonatal outcome in pregnant women with hemoglobinopathy. The medical data of the study group attending antenatal OPD/ emergency and delivering at Guwahati medical college and hospital between August 1st, 2021 to 31st July, 2022 were extracted and recorded in the proforma.

Results: A total of 200 pregnant women with hemoglobinopathy were included in the study. Among the various types of hemoglobinopathy HbE homozygous constituted the highest with 39% (n=78). Among obstetric outcomes preterm (35.9%, n=14) and caesarean delivery (60%, n=23), maternal complications (87.2%,n=34) were higher in patients with HbE with beta Thalassemia trait. Low birth weight (62.1%,n=46), NICU admission (54.1%,n=40) were higher in HbE homozygous group.

Conclusion: In our study patients with feto-maternal complications were higher in patients having HbE with beta thalassemia but there were no maternal mortality or stillbirth in the study population.

Clinical correlation of doppler ultrasound in pregnancy induced hypertension with special reference to perinatal outcome

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Objective: To identify early high risk fetuses by changes in doppler flow velocity waveforms.

Methodology: This was an observational, cross-sectional study of 90 singleton pregnancies in the third trimester with pregnancy induced hypertension. The results of last doppler ultrasound within one week of delivery were used for analysis. Adverse perinatal outcome was studied in the form of emergency caesarean section for fetal distress, APGAR<7 at 5 mins, NICU admission, neonatal morbidity (asphyxia, meconium aspiration syndrome, sepsis) and perinatal mortality. Sensitivity and specificity of various doppler parameters were calculated after comparing with standard.

Result: Cerebroplacental ratio and umbilical artery pulsatility index had the highest sensitivity (100%) and Middle cerebral artery resistance index had the highest specificity (97%) in predicting perinatal outcome. Uterine artery doppler evaluation also gives additional information in predicting perinatal outcome.

Conclusion : Amongst various doppler parameters cerebroplacental ratio is the best predictor of adverse perinatal outcome. Combination of various parameters is useful in decision making process mainly to decide the timing of delivery.

Time to redefine prolonged third stage of labor? A systematic review and meta-analysis of the length of the third stage of labor and adverse maternal outcome after vaginal birth

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Objective: This study aimed (1) to assess the association between the length of the third stage of labor and adverse maternal outcome after vaginal birth and (2) to evaluate whether earlier manual placenta removal reduces the risk of adverse outcome.

Data Sources: PubMed, MEDLINE, Embase, ClinicalTrials.gov, the Cochrane Library, Journals@Ovid, and the World Health Organization International Clinical Trials Registry were searched from January 1, 2000, to June 13, 2023.

Study Eligibility Criteria: All studies that assessed adverse maternal outcome, defined as any maternal complication after vaginal birth, concerning the length of the third stage of labor and the timing of manual placenta removal were included.

Methods: The included studies were evaluated using the Conducting Systematic Reviews and Meta-Analyses of Observational Studies of Etiology methodology. Pooled odds ratios with 95% confidence intervals were calculated. Heterogeneity (I2 test) was assessed, subgroup analyses were performed, and 95% prediction intervals were calculated.

Results: To meet the first objective, 18 cohort studies were included. The assessed cutoff values for the length of the third stage of labor were 15, 30, and 60 minutes. Women with a third stage of labor of ≥15 minutes had an increased risk of postpartum hemorrhage compared with those with a third stage of labor of <15 minutes (odds ratio, 5.55; 95% confidence interval, 1.74–17.72). For women without risk factors for postpartum hemorrhage, the odds ratio was 2.20 (95% confidence interval, 0.75–6.49). Among women with a third stage of labor of ≥60 minutes vs women with a third stage of labor of <60 minutes, the odds ratio was 3.72 (95% confidence interval, 2.36–5.89). The incidence of red blood cell transfusion was higher for a third stage of labor of ≥30 minutes than for a third stage of labor of <30 minutes (odds ratio, 3.23; 95% confidence interval, 2.26–4.61). Of note, 3 studies assessed the timing of placenta removal and the risk of adverse maternal outcome. However, the results could not be pooled because of the different outcome measures. Moreover, 1 randomized controlled trial (RCT) reported a significantly higher incidence of hemodynamic compromise in women with manual placenta removal at 15 minutes than in women with manual placenta removal at 10 minutes (30/156 [19.2%] vs 10/156 [6.4%], respectively), whereas 2 observational studies reported a lower risk of bleeding among women without manual placenta removal.

Conclusion: Although the risk of adverse maternal outcome after vaginal birth increases when the third stage of labor exceeds 15 minutes, there is no convincing supporting evidence that reducing the length of the third stage of labor by earlier manual removal of the placenta can reduce the incidence of adverse maternal outcome.