JOURNAL CLUB (30/7/25)
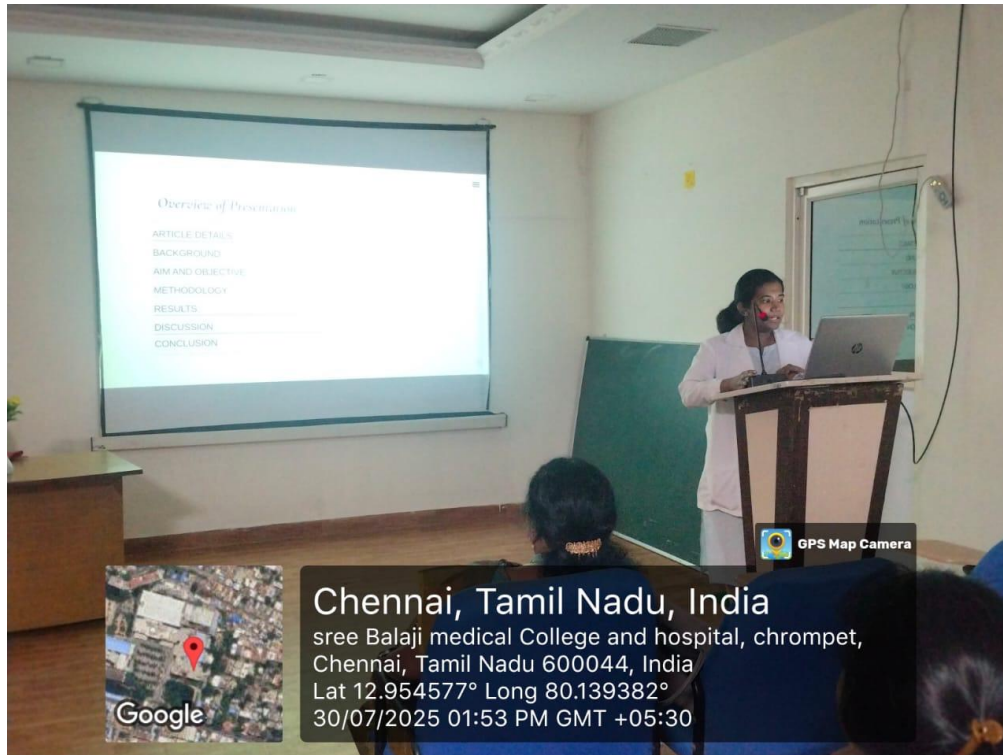
JOURNAL TITLE : Minimizing tearing during vaginal delivery with a perineal protection device: a randomized controlled trial

PRESENTER: Dr.HARSHINEE N

The randomized controlled trial by Andrée et al., published in AJOG MFM (2024), investigated the effectiveness of a perineal protection device (PPD) in reducing perineal trauma during vaginal delivery in primiparous women. Conducted at Helsingborg Hospital in Sweden, the study enrolled 92 women randomized to either receive standard manual perineal support or the PPD during the second stage of labor. The primary outcome was the severity of perineal tearing, with secondary outcomes including labial and vaginal lacerations. The intervention involved the use of the PPD at crowning, designed to distribute pressure and support the perineum, while allowing for episiotomy if needed.

The findings demonstrated a statistically significant reduction in the incidence of grade ≥2 perineal tears among those who received the PPD (odds ratio [OR], 0.40; 95% CI, 0.17–0.94; P = .033), with the number needed to treat calculated at 4.3. Furthermore, ordinal logistic regression showed a 64% reduction in the odds of injury severity per grade increment (OR, 0.36; P = .013). The intervention group also experienced significantly less labial tearing (P = .016), with no adverse neonatal outcomes observed and no significant

difference in vaginal tearing or deep second-degree tears. These findings suggest that the PPD offers a promising method for reducing maternal birth trauma.

While the results are promising, the authors acknowledged limitations, including the inability to blind participants and care providers, potential bias in tear assessment, and limited sample size for detecting differences in rare outcomes such as sphincter injuries. Nevertheless, the study contributes valuable data to the limited body of evidence on interventions targeting second-degree perineal tears, which are increasingly recognized for their long-term impact on maternal health. The authors advocate for larger, multicenter trials to validate these findings and explore broader implementation in clinical practice.

2.Dr.Smitha subramaniam

Topic: Elevated first trimester hepcidin levels is associated with reduced risk of iron deficiency anemia in late pregnancy- A prospective cohort study
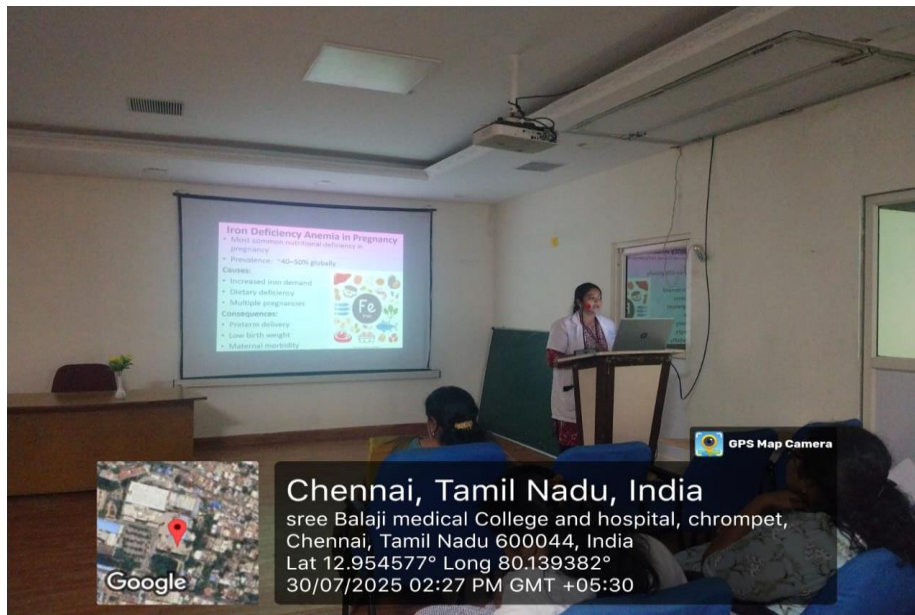
This prospective cohort study conducted in China evaluated whether first-trimester hepcidin levels could predict the risk of iron deficiency anemia (IDA) in late pregnancy. Hepcidin, a liver-derived hormone that regulates systemic iron levels, naturally decreases during pregnancy to meet the increased iron demands of the growing fetus and placenta. The study followed 353 pregnant women and found that those with moderate to high first-trimester hepcidin levels had higher hemoglobin and serum iron levels in the third trimester, indicating a lower risk of developing IDA. The findings suggest that measuring early pregnancy hepcidin can serve as a useful biomarker for iron status, aiding in the timely prevention of IDA. However, the study was limited by its single-center design and small IDA sample size.

3. Dr. Pritika Final year OG PG

Topic: Changes in Ovarian Functions Following Platelet-Rich Plasma (PRP) Injection and Its Impact on in Vitro Fertilisation (IVF) Treatment: A Pre-Post Research
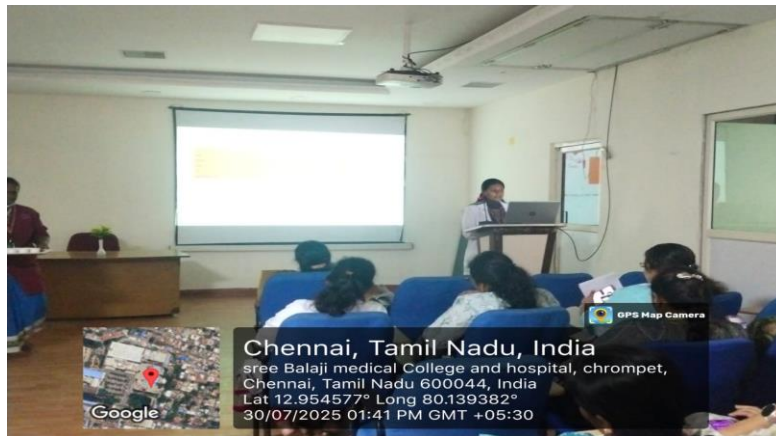
Primary ovarian dysfunction is a medical disorder characterised by a substantial deterioration in ovarian function. This disorder has gained attention as a significant global public health issue.The primary challenges in reproductive science revolve around the suboptimal fertility outcomes experienced by women with poor ovarian reserves Despite the implementation of many strategies to increase the achievement rate of assisted reproductive technology (ART) in poor-risk persons the pregnancy rate in this population continues to be low. Although oocyte donation is gaining popularity, a multitude of women grapple with the concept of not having a child with their individual genetic material. One further obstacle to oocyte donation is the presence of ethical or religious restrictions in certain countries, which necessitate women to pursue experimental treatment instead of using donor oocytes. Autologous platelet-rich plasma (PRP) is becoming increasingly popular in the field of ovarian rejuvenation and is being used as a regenerative treatment in various areas .PRP has beentreated with growth factors and cytokines. Platelets play a

promising function in regenerativetherapy because they initiate cell proliferation and tissue development .Platelet increase in atissue induces tissue regeneration by generating proteins in reaction to cytokines and growth hormones, therefore reversing cellular damage and renewing the tissue .PRP has been studied for its potential in treating infertility associated with ovarian insufficiency

4. SPEAKER : Dr.Sunitha V , 3rd year

post graduate, dept of OBG .

TITLE : Ultrasonographic Assessment of Myometrial Thickness as a Predictor for Complications of Third Stage of Labor in Primigravidae: An Observational Cohort Study

Aim and background: To assess the efficacy of sonographically detected myometrial-thickness as predictor of third stage labor complications   in primigravidae.

Materials and methods: This was a prospective observational cohort study done at a tertiary teaching-institute over a duration of 12 months on hundred low-risk primigravidae with singleton term pregnancy in labor. After active management of third stage of labor, ultrasonographic

assessment of upper and lower uterine-segment thickness (UUS, LUS) was done every 2 minutes till third stage completion. Labor outcome was noted.

Statistical analysis: This was plotted as function of time to find the trend of absolute myometrial-thickness and ratio of UUS:LUS change during

third stage. Cut-off ratio of UUS:LUS for prediction of third stage outcome and its positive and negative predictive value, were calculated by ROC curve and correlated with the third-stage outcome.

Results: There was progressive increase in UUS, decrease in LUS thickness and increase in UUS:LUS ratio during third stage. A cut-off ratio of ≥1.98 (UUS:LUS) (positive and negative predictive value of 96.55 and 84.2%, respectively) was associated with normal third stage.

Conclusion: Dynamic changes in myometrial thickness lead to an increasing and decreasing trend of thickness in UUS and LUS, during third stage of labor. The ratio of UUS:LUS thickness <1.98 is associated with increased third-stage complications.

Clinical significance: Ultrasonography (USG) is a potential tool to predict third stage complication