BACKGROUND/PROBLEM

- Cesarean sections are the most common surgical procedure performed by obstetricians/gynecologists, and are the most significant risk factor for postpartum maternal infection.
- Sepsis and post-natal infection contribute to significant maternal morbidity and mortality, and it is estimated that women who undergo cesarean delivery have a 5-20 fold increased risk of infection when compared to their counterparts who deliver vaginally.
- Endometritis complicates the postoperative course of a cesarean delivery 6-27% of the time, occurs up to 10 times more frequently in cesarean deliveries, and can lead to bacteremia, peritonitis, and sepsis.
- Randomized trials have demonstrated: Precesarean vaginal preparation with antiseptic agents (Povidone Iodine, Chlorhexidine, and Vaginal Metronidazole) reduces post-operative rates of endometritis by more than 50%.
  - A significantly lower incidence of endometritis (RR 0.52) and postoperative fever (RR 0.65) in patients who received antiseptic vaginal cleansing as opposed to placebo or no treatment.
  - Significant improvement in rates of postpartum endometritis for laboring women (8.1% compared with 13.8%) or women with rupture membranes (4.3% compared with 20.1%).
- These trials did not demonstrate:
  - Significant reduction in endometritis outside of laboring patients or patients with ruptured membranes.
- Currently, ACOG supports vaginal preparation prior to cesarean section as the standard of care for obstetric patients, recommending further studies on the impact of vaginal preparation before elective cesarean section prior to labor or ruptured membranes.
- Vaginal preparation/cleansing may provide a feasible, quick, inexpensive, and safe intervention to potentially decrease infectious morbidity due to cesarean section.

PURPOSE

Our institution implemented a vaginal cleansing protocol in April 2019. The purpose of this quality improvement study is to investigate whether implementation of a vaginal cleansing protocol for elective or scheduled cesareans prior to labor or ruptured membranes improves the risk of postpartum endometritis.

OBJECTIVE

Primary objective: to investigate rates of postpartum endometritis in patients undergoing elective and scheduled cesarean delivery, and whether these rates decreased with the implementation of the newly established vaginal cleansing protocol.

Secondary objective: to explore whether there was improvement in maternal morbidity including postoperative maternal fever, maternal sepsis, length of hospital stay, rates of 30-day readmission, and wound infection rates following implementation of a vaginal cleansing protocol.

METHODS

- Retrospective review of all pregnant peoples with scheduled cesarean deliveries in one urban, teaching hospital between 04/2018-11/2020.
  - Deliveries were excluded if they were laboring, had ruptured membranes prior to surgery, had known iodine allergy, or other intraoperative complications.
  - Deliveries were divided into three groups based on vaginal preparation protocol implementation (Figure 3).

- Descriptive and inferential statistics were computed; Chi-square or Fisher’s exact test was used to assess differences in rates of endometritis or other postpartum complications.

RESULTS

- Overall, 320 scheduled cesarean deliveries were included (Figure 1).
- Groups did not differ based on maternal characteristics.

CONCLUSIONS

While there was no reduction in postpartum endometritis in patients undergoing planned cesarean delivery, universal implementation may still be a reasonable intervention given its low cost and known benefit in laboring patients or those with ruptured membranes.

- Rates of endometritis was not different between groups (Figure 2).
- Similarly, postpartum complication rates for fever, wound infection, sepsis, and 30-day readmission unrelated to pre-eclampsia were not different between groups (Figure 2).

REFERENCES