Re-audit of the Fetal Pillow (FP): A novel intervention to reduce maternal and fetal complications at Caesarean Section at Full Dilation (CSFD)

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CSFD have an increase in maternal and fetal complications. An innovative method introduced to reduce the morbidity relating to CSFD is the FP, a silicone balloon inserted vaginally prior to CSFD resulting in a 3-4cm upward displacement of the fetal head.

A re-audit into the use of the FP in our department was performed. 75 cases were analysed retrospectively. Our initial audit showed the FP aided delivery of the fetal head at CSFD, demonstrating a reduction in operating time, intra-operative trauma, and blood loss. The aim of the re-audit was to establish if our initial statistics of reduction of fetal and maternal complications relating to CSFD are maintained or improved.

35 cases had unsuccessful trial of forceps and 92% had vertex of spines to +2. Average operating time was 44 min, compared to 41.6 min from previous audit. Average blood loss was 674mls, compared to 698mls from previous audit. 32% had uterine extensions compared to 38% from previous. Only 4% reported difficulty in delivering the fetal head. No fetal complications were noted. Maternal complications included 7 cases of pyrexia, 7 cases of re-admission with wound infection, and 2 patients had blood transfusion. Average inpatient stay was 3 days. 1 case of uterine rupture was noted in a patient with history of previous caesarean section (CS). Risk management conclusion showed no causal relation was established in relation to FP.

The potential benefit of the FP as seen during the initial audit was sustained, namely: reduction in operating time, uterine extensions, blood loss, and fetal complications. A local hospital protocol for FP use in CSFD is thus being drafted. Considering the implication of the FP in association with uterine rupture in patients with history of previous CS, a further audit and capturing data of previous CS and use of FP is underway.
Re-audit of the Fetal Pillow (FP): A Novel Intervention to Reduce Maternal and Fetal Complications at Caesarean Section at Full Dilation (CSFD)
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Background

CSFD constitutes an increase in maternal and fetal complications. An innovative method introduced to reduce the morbidity relating to CSFD is the FP, a silicone balloon inserted vaginally prior to CSFD resulting in a 3-4cm upward displacement of the fetal head.

Aim and Methods

A re-audit into the use of the FP in our department was performed. 75 cases were analysed retrospectively. Our initial audit showed the FP aided delivery of the fetal head at CSFD, demonstrating a reduction in operating time, intra-operative trauma, and blood loss. The aim of the re-audit was to establish if our initial statistics of reduction of fetal and maternal complications relating to CSFD are maintained or improved.

Results

Figure 1- Patient Information:
- Average gestation: 39+2 weeks
- Average age: 32 years
- Average BMI: 31
- Average 1st Stage duration: 462 minutes (7.7 hours)
- Average 2nd stage duration: 208 minutes (3.5 hours)
- Average parity: Para 1 31%, Para 2 9%, Para 3 1%
- No 16%, Yes 84%
- No 28%, Yes 72%

Figure 2- Labour Information:
- Trial Of Forceps: No 32, Yes 42
- Abdominal Palpation: Zero 32, One fifth 42, Two fifths 1
- Station of Head: Minus 1 6, Zero 30, Plus one 32

Figure 3- Caesarean Section Information:
- Delivery of Fetal Head: 1- Very Difficult: 0, 2- Average: 25, 3- Easy: 19, 4- Very Easy: 27
- Uterine Extension Grade: No 68%, Yes 32%
- Note: 38% uterine extensions from previous audit

Figure 4- Maternal Complications:
- None had a catheter > 4 days
- None had DIC

Conclusion

The potential benefit of the FP seen during the initial audit was sustained, namely: reduction in operating time, uterine extensions, blood loss, and fetal complications. A local hospital protocol for FP use in CSFD is thus being drafted and current level of education support needs to be continued. Considering the implication of the FP in pregnancy.

References


Graham A: Audit trial of forceps and CS full dilatation in relation to...