Return-to-theatre following Caesarean Section: A retrospective review at a tertiary maternity hospital

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Background

- Increasing Caesarean section rates will no doubt lead to an increase in the number of women returning to theatre and having significant post operative complications.
- The identification of deteriorating patients post caesarean section is a crucial aspect of obstetric care that demands specific attention.
- In depth reviews of maternal morbidity cases have concluded that inadequate communication between teams and a delay in recognition of and response to deterioration are key contributory factors to the level of maternal morbidity.[1]
- Any return to theatre or relaparotomy following caesarean section is considered a near-miss mortality with vigilance needed in postoperative recovery for timely detection of deterioration.[2]
- Recently, we have had several cases that have not consistently had timely senior review in the recovery unit, leading to maternal morbidity. Consequently, there is need for a focused review.

Aim

- To identify variables that increase risk of return-to-theatre which could be optimised to improve outcomes for women delivering at Gold Coast University Hospital, a tertiary maternity unit.

Methods

- This quality improvement initiative was a single-centre audit at Gold Coast University Hospital.
- We retrospectively analysed the demographics, surgical technique, complications, vasopressor use and clinical observations by reviewing the case notes of women who returned-to-theatre following caesarean section between 2020-2023.

References

1. Maternal Morbidity Working Group. Maternal Morbidity Working Group Annual Report. 2018. https:www.hqsc.govt.nz/assets/MMWG/PR/MMWGAnnualReport2018.pdf
2. Ahmed, M., Pandya, S., Supraneni, T (2016). Return to the Operation Theatre: An Analysis of repeat surgeries in operative obstetrics. The Journal of Obstetrics and Gynaecology India 66, 117-121.

Results

50% **Of the primary operation of the return-to-theatre cases was performed within one hour of a clinical handover which occurs at 8am and 8pm**

- **41%** Caesarean section rate at GCUH (combined emergency and elective cases)
- **0.3%** Rate of return to theatre of all caesarean sections
- **73%** Return-to-theatre cases that were from emergency caesarean sections
- **50%** Of the return to theatre cases were primiparous women
- **86%** Of the return to theatre cases were primary caesarean sections
- **33%** Had a listed complexity in the initial operation

Reasons for returning to theatre

- Primary post partum haemorrhage (PPH)
- Secondary PPH
- Haemodynamic instability
- Acute wound complications

Seniority of the primary surgeon of the initial LSCS

- **33%** Consultant
- **33%** Senior Registrar
- **33%** Junior Doctor (Supervised)

Discussion

Despite extensive data collection pertaining to a vast number of variables outlined in results, there is no significance in their ability to predict clinical deterioration and return to theatre.

The importance of clinical handover is well established through literature, however the clinical complexities that continue concurrently during this time in a tertiary maternity unit cannot be underestimated.

This audit has established that maternal morbidity significantly increases across handover time.

Currently, there is no mandatory Consultant cover across handover times at this teriary maternity unit.

This project will initiate a review of how to maximise patient safety during the critical handover times of a shift while prioritising a focused yet comprehensive handover in a tertiary maternity unit.

1. The first step is increasing seniority of staff across this critical period in order to reduce maternal morbidity and ensure adequate clinical handover can occur.