

5 years of Caesarean sections; how far have we come with wound infections?

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Background


Caesarean sections are performed in 36% of all births in Australia, with wound infections occurring as commonly as 15%, resulting in wound dehiscence, collections, or abscesses. This study examines the rate of surgical site infections post caesarean sections in a Victorian hospital from 2016 -2021 to help develop strategies to reduce morbidity, readmissions to hospital and other implications.

Methods

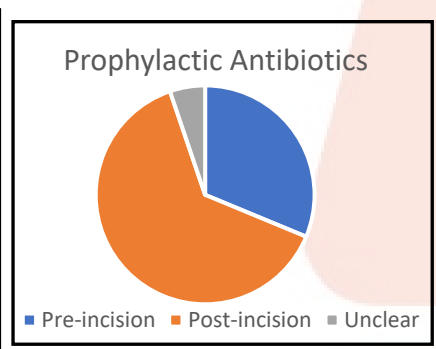
A 5-year retrospective cohort study from 2016 -2021 of all patients who was admitted to hospital for a wound infection within a year since their caesarean section. Their operation report, antenatal and intrapartum history, and nature of post-operative infection were analyzed. Important outcomes measured are infection organism, management, and prolonged hospital stay. Patients who had caesareans in other hospitals were excluded.

Results

Risk factors for wound infections



- 65% are smokers
- 35% are non-smokers
- 70% had a BMI >25
- 30% had a BMI <25

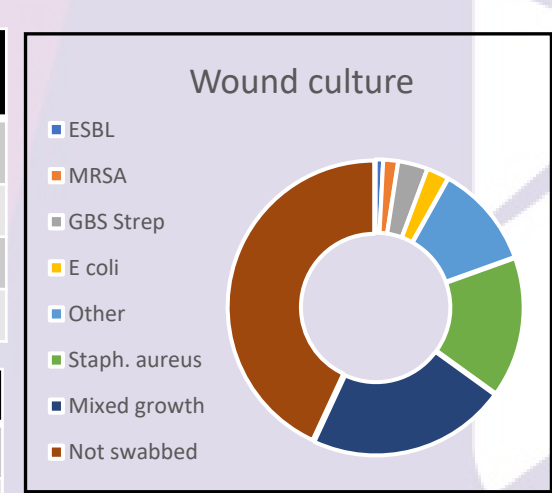


Management of Caesarean wound infection

Return to operating theatre (EUA/Debridement)	7
Drainage by Interventional radiology	8
Oral antibiotics only	18
Intravenous antibiotics	91

Incidence of Caesarean related wound infections

Emergency Caesarean section (total = 2981)	2.7% (n=81)
Elective Caesarean section (total = 2451)	0.85 (n=22)



Length of stays for Caesarean section wound related infections

Median length of stay	2 days
Average length of stay	5 days
Longest length of stay	59 days
Number of stays >7 days	15 stays
Number of stays for 1 day	59 stays

We identified 123 postpartum representations to hospital out of 5432 caesarean sections completed in 5 years, 3 were excluded by having deliveries in a different hospital, and 17 were excluded for infections not related to the Caesarean section wound. The average length of stay was 5 days with the longest stay of 59 day, and a median of 2 days. 69% (n=70) had a BMI >25, and 8% (n=9) were smokers. 29% (n=30) had prophylactic antibiotics before incision, 60% (n=61) after incision and in 5 cases it was unclear if antibiotics was given. 6% (n=7) required a repeat operation to debride their wound infection, with majority being treated with intravenous antibiotics. The main wound culture organism was Staphylococcus Aureus 15% (n=19).

Conclusion

In addition to poorer health outcomes, wound infections can affect socioeconomic implications by reducing mother and baby bonding time, breast feeding opportunities and increasing maternal length of stay in hospital. One of the main ways to reduce wound infection is increasing the rate of pre-incision antibiotics, and the reduction of modifiable risk factors. Management related complications and time to recover can be varied, hence as the incidence of caesarean sections are increasing, it is important to highlight factors that can reduce the burden of morbidity from such a common surgery.