

Rational prescribing? Perioperative antibiotic audit in the busiest maternity hospital in Uganda

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Introduction

- Puerperal sepsis post caesarean-section (CS) is a major cause of global maternal mortality. (1)
- According to World Health Organisation (WHO) guidelines, all women should receive a single dose of antibiotic prophylaxis pre-operatively, to reduce infection risk. (2)
- Overprescribing of empiric antibiotics is common (3) and when prescribed empirically post-CS it can lead to increased rates of antimicrobial resistance (AMR), one of the top global public health and development threats, as well as greater economic costs.



Figure 1: Kawempe National Reference Hospital.

Aim/Methods

Aim:

1. To review adherence to WHO guidelines for prophylactic antibiotics in CS patients at Kawempe National Referral Hospital, an urban obstetrics and gynaecology hospital in Kampala, Uganda.
2. To review the prevalence of women prescribed antibiotics empirically post-CS and on discharge.

Methods:

- Chart review of prescribed antibiotics from anonymous electronic health records of 100 CS patients from 17th- 24th June 2024 on the postnatal ward in Kawempe Hospital.
- Follow up was conducted after 1 week to identify patients readmitted with sepsis or wound infection.

Results

- 91/100 patients (91%) in the sample had an emergency CS, the most common indication being obstructed labour. The remainder (7%) had elective CS.
- 3/100 (3%) patients were readmitted with wound infection at follow-up.
- The average number of days for which ceftriaxone was given post-operatively, was 2.63 (range 1 - 7), whilst the average for metronidazole was 1.91 (range 1 - 5).

Table 1: Antibiotic prescribing in 100 Caesarean Section patients at Kawempe National Reference Hospital from 17th -24th June 2024: pre-operatively, post-operatively and those prescribed for discharge.

	Medication	No of Patients (n=100)
Pre-operative (C-section)	IV ceftriaxone	49/100 (49%)
	No prophylactic antibiotics	51/100 (51%)
Post-operatively (C-section)	IV metronidazole and ceftriaxone	69/100 (69%)
	Alternative combination	31/100 (31%)
Discharge	PO metronidazole and ampicillin/cloxacillin	53/100 (53%)
	PO metronidazole and cefixime	19/100 (19%)
	Alternative combination	28/100 (28%)

Conclusions

- Kawempe Hospital does not adhere to WHO guidelines on prophylaxis for CS patients, with only half of the patients receiving prophylactic antibiotics.
- All patients were given antibiotics post-operatively, with more than two thirds receiving medications intravenously.
- Evidence shows that post-operative antibiotics do not have a significant impact on post-CS infection risk and can contribute to antimicrobial resistance. (4)
- A move towards WHO recommendations, through improved staff and patient education, could save considerable hospital resources, and is an important step in the global fight against AMR, and improving maternal mortality rates.

References

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