Guideline for Prevention of Sepsis after Operative Vaginal Delivery

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1. Background

Sepsis is a significant cause of maternal death worldwide (19 500 in 2016) [1,2]
For every death, there are 70 left with life long illness and significant sequelae.
It is recognised that the use of prophylactic antibiotics reduces all forms of maternal infection after Caesarean section (CS) by up to 60-70%. Without this it is estimated that about 20% of women have an infection post birth via CS and up to 16% post-operative vaginal birth. Until recently neither the WHO or RCOG have recommended routine use of antibiotics in operative delivery.[3,4]

The ANODE trial[i3] (Lancet June 2019), seeking to address whether comparable outcomes were possible with operative delivery, was a multicentre RCT in 27 UK units with patients over 16 years old totalling some 3427 women >36 weeks' gestation. Participants who were not penicillin allergic, were randomised to either Augmentin 1.2g or placebo (saline) (one dose followed by follow up) for 6 weeks post-operative delivery. The primary outcome was confirmed or suspected maternal infection within 6 weeks of delivery defined by a new prescription of antibiotics for specific indications, a confirmed systemic infection on culture, or endometritis.

The results of this trial showed a significant reduction in infections (11% occurrence in treatment arm vs 19% in placebo arm, RR 0.58 ($p<0.001$)) no significant adverse event could be correlated with the treatment.

2. Indications

To include all mothers undergo instrumental birth regardless of whether in theatre or in a delivery room. There is no relevance as to the station of the head or whether episiotomy was performed.

Contraindications

Exceptions to this are women who are already on a continuing course of IV antibiotics for suspected or proven sepsis not including prophylaxis for GBS in Labour. Mothers have no other exclusion criteria including prolonged rupture of membranes.

3. Method of Implementation

Verbal consent should be taken ensuring no history of allergy or reactions

Indication	Drug	Dose	Route	Administration
Operative Vaginal Births – To be given single dose as soon as possible before or after delivery, and no later than 6 hours after delivery,	Co-Amoxiclav	1.2g	IV injection	Reconstitute 1.2g with 20ml water for injection and give over 3-4 minutes
	Penicillin allergy: Clindamycin	600mg	IV infusion	Dilute 600mg in 50ml sodium chloride 0.9% or glucose 5% and give over at least 20 minutes

4. New Evidence for Change in practice

The cost per patient during the trial including the study, was approximately £100 for those who received a single IV dose of antibiotics, or £150 for those who received placebo. It was thought that extra costs were incurred in the placebo group for re-attending hospital including, bed space, investigations and drug administration. Qualitative factors also included childcare, and the impact it may have on mother-child bonding.

Additional resource use analysis done for the ANODE trial estimates that for each additional 100 doses of antibiotic used in prophylaxis, 168 treatment doses will be saved, representing a 17% overall reduction in antibiotic use with a policy of universal prophylaxis.

Even in the antibiotic group, more than one in every ten women had a postnatal infective complication, which emphasises the importance of ongoing awareness of potential infection and further research to identify ways to reduce this proportion further.

5. Follow up

Post natal maternal care can be managed in exactly the same way as recommended by local and national guidelines.

6. Audit suggestions

1. Compliance with guideline audit including rate of readmission and de novo infections
2. Rate of penicillin and other allergies

References

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