South Australian Perinatal Practice Guidelines

Peripartum prophylactic antibiotics

Introduction

- Infection during pregnancy and the postpartum period may be caused by a combination of organisms, including aerobic and anaerobic cocci and bacilli
- Procedures, such as caesarean section and manual removal of the placenta, increase the risk of infectious morbidity
- Prophylactic antibiotics and standard infection prevention practices can reduce the risk of postpartum infectious morbidity (WHO 2000)
- Women, who are suspected of or diagnosed as having an infection, should receive antibiotic treatment specific to their infection

Manual removal of placenta

- Manual removal of the placenta is associated with an increased rate of postpartum endometritis. Antibiotic prophylaxis is not of proven benefit but is currently recommended. Single dose prophylaxis is recommended
- If possible, prophylactic antibiotics should be given 30 minutes before starting the procedure

Recommended antibiotic treatment:

- Single IV dose of Ticarcillin-clavulanate 3.1g (Timentin®)
- If Ticarcillin-clavulanate is not available, give single IV doses of:
  - Ampicillin (or amoxicillin) 2 g
  - plus
  - Gentamicin 5 mg / kg
  - plus
  - Metronidazole 500 mg

Allergy to penicillin

- Single IV doses of both Lincomycin 600 mg and Gentamicin 5 mg / kg

Caesarean section

- Single dose prophylactic antibiotic cover should be administered to all women having a caesarean section (Thomas and Paranjothy 2001)
- The optimal timing for the administration of prophylactic antibiotics is before skin incision (Kaimal et al. 2008; Costantine et al. 2008; Walsh 2010)

Recommended antibiotic treatment

- Cephazolin 1 gram IV before skin incision
- If allergic to cephalosporins: - single doses of both Lincomycin 600 mg and Gentamicin 5 mg / kg IV

3rd or 4th degree perineal tears

- There are no randomised controlled studies comparing antibiotics with placebo for prevention of infection in third or fourth degree perineal tears (Buppasiri et al. 2005)
- Infection carries a high risk of breakdown of the repair resulting in anal incontinence and fistula formation. Therefore, broad-spectrum antibiotics are recommended during and after the repair (RCOG 2007)

Recommended antibiotic treatment

- At the time of repair, a single IV dose of Ticarcillin-clavulanate 3.1g (Timentin®)

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- If Ticarcillin-clavulanate is not available, give single IV doses of both Cephazolin 1 gram and Metronidazole 500 mg

Allergy to penicillin

Single IV doses of both Lincomycin 600 mg and Gentamicin 5 mg / kg

Postpartum cover

- Commence oral Augmentin Duo® (amoxicillin 500 mg and clavulanic acid 125 mg) 12 hourly with meals for 5 days
- If allergic to penicillin, use both
  - oral Ciprofloxacin 250 mg 12 hourly for 5 days
  - plus
  - oral Clindamycin 450mg 8 hourly for 5 days

Breastfeeding: All these drugs are acceptable

Antibiotic prophylaxis for women with cardiac disease

- Antibiotic prophylaxis in labour is not recommended for:
  - Isolated secundum atrial septal defects
  - Mitral valve prolapse
  - Valvular heart disease
  - Hypertrophic cardiomyopathy
  - Cardiac pacemakers or implanted defibrillators
  - Previous coronary bypass grafts or coronary stents
  - Previous rheumatic fever without valvular dysfunction
  - Complete surgical or device closure of atrial septal defect, ventricular septal defect or patent ductus arteriosus more than 6 months after closure
  - Physiological, functional or innocent murmurs
- Antibiotic prophylaxis in labour is not recommended for uncomplicated vaginal births
- Intrapartum antibiotic prophylaxis is recommended for vaginal birth complicated by amnionitis (suspected or proven) or prelabour rupture of membranes, when one of the following cardiac conditions is present:
  - Prosthetic heart valve
  - Complex congenital heart disease
  - Past history of endocarditis
  - Surgically constructed systemic-pulmonary shunt, or conduit

Recommended antibiotic treatment

- Gentamicin 2 mg / kg IV as a single intrapartum dose given as soon as possible in labour
- plus
- Ampicillin [or amoxycillin] 2 g IV as a stat dose as close as practical to the time of birth

Allergy to penicillin

- Gentamicin 2 mg / kg IV as a single intrapartum dose given as soon as possible in labour
- plus

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- Vancomycin 1 g IV, administered slowly (over at least one hour) and repeated after 8 hours if birth has not occurred

Monitoring gentamicin / tobramycin levels

- In the absence of a history of renal disease, short term treatment (2-3 days) with Gentamicin or Tobramycin does not require levels
- If levels are required, available evidence suggests the area under the curve (AUC) of plasma aminoglycoside concentration versus time may be a better predictor of toxicity and efficacy than the traditional peak and trough monitoring
- Two blood samples taken at one hour and six hours after the first dose are required to calculate the AUC from these 2 plasma concentrations and dosage modifications recommended as necessary
    - It is important to record the exact time of taking the blood samples on the request forms / collection tubes
- Repeat levels are not usually required unless treatment is prolonged, in which case they should be done after 5-7 days. Potential efficacy or toxicity concerns may require earlier repeat levels

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Abbreviations

WHO	World Health Organisation
IV	Intravenous
g	Gram(s)
mg	Milligram(s)
kg	Kilogram(s)
et al	And others
RCOG	Royal College of Obstetrics and Gynaecology
AUC	Area under the curve

Version control and change history

PDS reference: OCE use only

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2.0	21 Apr 09	23 Aug 10	Reviewed
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