South Australian Neonatal Medication Guidelines

ampicillin

500mg, 1g injection

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Dose and Indication

1gram = 1000mg

Infection due to susceptible organisms

Intravenous, Intramuscular

50mg/kg/dose

| Corrected Age (weeks) [Gestational Age PLUS Postnatal Age] | Postnatal age (days) | Frequency (hours) | |
|--|-------------------------|-------------------|--|
| < 30 | ≤ 28 | every 12 hours | |
| \ 30 | >28 | every 8 hours | |
| 30 to 36 | ≤ 14 | every 12 hours | |
| 30 10 30 | >14 | every 8 hours | |
| 37 to 44 | ≤ 7 | every 12 hours | |
| 07 to 11 | >7 | every 8 hours | |

Length of treatment should be guided by pathology and clinical picture; however in proven sepsis treatment should continue for a minimum of 7 days.

Meningitis and Osteomyelitis

Intravenous

100mg/kg/dose

| Corrected Age (weeks) | Postnatal age (days) | Frequency (hours) |
|--------------------------------------|----------------------|-------------------|
| [Gestational Age PLUS Postnatal Age] | | |
| <30 | ≤ 28 | every 12 hours |
| 450 | >28 | every 8 hours |
| 30 to 36 | ≤ 14 | every 12 hours |
| 30 10 30 | >14 | every 8 hours |
| 37 to 44 | ≤ 7 | every 12 hours |
| 37 10 44 | >7 | every 8 hours |

Length of treatment should be guided by pathology, clinical picture and infectious disease consultant advice.



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Preparation and Administration

Intravenous

| Vial Strength | Volume of Water for Injection to | Final Concentration of ampicillin | |
|---------------|----------------------------------|-----------------------------------|--|
| (mg) | add (mL) | (mg/mL) | |
| 500mg | 4.7mL | 100mg/mL | |
| 1000mg | 9.3mL | 100mg/mL | |

| Dose | 50mg | 100mg | 150mg | 200mg | 250mg | 300mg |
|--------|-------|-------|-------|-------|-------|-------|
| Volume | 0.5mL | 1mL | 1.5mL | 2mL | 2.5mL | 3mL |

Push over at least 5 minutes. For patients being treated for meningitis, the dose must be administered over at least 10 minutes.

Discard remaining solution

Intramuscular

| Vial Strength | Volume of Water for Injection to | Final Concentration of ampicillin |
|---------------|----------------------------------|-----------------------------------|
| (mg) | add (mL) | (mg/mL) |
| 500mg | 2.2mL | 200mg/mL |
| 1000mg | 4.3mL | 200mg/mL |

| Dose | 50mg | 100mg | 150mg | 200mg | 250mg | 300mg |
|----------------------------|--------|-------|--------|-------|--------|-------|
| Volume | 0.25mL | 0.5mL | 0.75mL | 1mL | 1.25mL | 1.5mL |
| Discard remaining solution | | | | | | |

Compatible Fluids

Sodium chloride 0.9%

Adverse Effects

Common

Diarrhoea, pain and inflammation at injection site, secondary infection especially during prolonged treatment with broad-spectrum beta-lactam antibiotics

Infrequent

Vomiting, Clostridium difficile-associated disease



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Rare

Rash, black tongue, electrolyte disturbances (hypernatraemia or hypokalaemia due to sodium content of high parenteral doses), neurotoxicity, bleeding, blood dyscrasias, crystalluria (high IV doses)

Anaphylactic shock is not commonly seen in the neonates.

Practice Points

- > The stability of ampicillin is greatly reduced in glucose solution. However ampicillin can be injected into the side arm of a glucose infusion as the contact time with the solution is insufficient to cause significant drug degradation.
- > Rapid administration of large doses may result in CNS excitation or seizure activity.
- > For mild infections use oral amoxycillin.

Version control and change history

PDS reference: OCE use only

| Version | Date from | Date to | Amendment |
|---------|---------------|---------|------------------|
| 1.0 | November 2012 | current | Original version |
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