South Australian Neonatal Medication Guidelines

piperacillin-tazobactam

piperacillin 4g with tazobactam 0.5g injection

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Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

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Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient's medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary.
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Dose and Indications

1gram = 1000mg

Dose according to piperacillin content

Infection due to susceptible organisms.

Monotherapy in the empirical treatment of necrotising enterocolitis.

Intravenous

50mg/kg/dose.

May be increased to 100mg/kg/dose depending on severity of infection and renal function

Corrected Age (weeks)	Postnatal age	Frequency	
[Gestational Age PLUS Postnatal Age]	(days)	(hours)	
< 30	≤ 28	every 12 hours	
	>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	
	>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.

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Contact: South Australian Neonatal Medication Guidelines Workgroup at:

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Preparation and Administration

Intravenous

There are **TWO STEPS** to this process.

STEP ONE: Add 16.8mL of Water for Injection to the vial (4000mg piperacillin content) and shake gently to dissolve (to a total volume of 20mL). The resulting solution contains 200mg/mL piperacillin.

STEP TWO: Further dilute 1mL of the 200mg/mL piperacillin solution with 9mL of compatible fluid (to a total volume of 10mL). The resulting solution contains 20mg/mL piperacillin.

Dose	50mg	75mg	100mg	125mg	150mg	200mg
Volume	2.5mL	3.75mL	5mL	6.25mL	7.5mL	10mL

Infuse over at least 30 minutes

Discard remaining solution

In severely fluid restricted infants, infusion strength 200mg/mL (STEP ONE ONLY) may be used

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Common

Diarrhoea, rash.

Infrequent

Bronchospasm, angioedema.

Rare

Black tongue, electrolyte disturbances (hypernatraemia or hypokalaemia due to sodium content of high parenteral doses), neurotoxicity, transient increases in liver enzymes and bilirubin, cholestatic jaundice, bleeding abnormalities (prolonged bleeding times and altered platelet aggregation)

Anaphylactic shock is not commonly seen in the neonates

Monitoring

- > Periodic liver function tests, with prolonged treatment
- > Review intravenous site for signs of extravasation.

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Practice Points

- > Piperacillin with tazobactam is the preferred monotherapy for gastrointestinal surgical condition
- > This is a broad spectrum antibiotic and is generally used on specialist advice.

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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