Neonatal Medication Guideline

Clinical Guideline

Ceftazidime

Policy developed by: SA Maternal, Neonatal & Gynaecology Community of Practice
Approved SA Health Safety & Quality Strategic Governance Committee on: 11 August 2017
Next review due: August 2020

Summary The purpose of this guideline is to guide nursing, , midwifery, medical and pharmacy staff in the dosing and administration of ceftazidime

Keywords Ceftazidime, neonatal medication guideline, sepsis, infection, ceftriaxone, cephalosporin

Policy history
Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y v2.0**
Does this policy replace an existing policy? **N**
If so, which policies? **Ceftazidime Neonatal Medication Guideline**

Applies to
All Health Networks
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS

Staff impact All Clinical, Medical, Midwifery, Nursing, Students, Allied Health, Emergency, Mental Health, Pathology, Pharmacy

PDS reference CG159

Version control and change history

Version	Date from	Date to	Amendment
1.0	Nov 2012	12 Aug 2014	Original version
2.0	12 Aug 2014	11 Aug 2017	Reviewed
3.0	11 Aug 2017	Current	Updated to include dilution of 2g vials

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South Australian Neonatal Medication Guidelines

cefTAZIDIME

1g, 2g injection

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

1g = 1000mg

2g = 2000mg

Infection due to susceptible organisms

Intravenous, Intramuscular

50 mg/kg/dose

Corrected Age (weeks) (Gestational age + Postnatal age)	**Postnatal age (days)**	**Frequency (hours)**
<30	≤ 28	every 12 hours
	> 28	every 8 hours
30 to 36	≤ 14	every 12 hours
	> 14	every 8 hours
≥37	≤ 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.

ISBN number: 978-1-74243-640-1
Endorsed by: South Australian Maternal, Neonatal & Gynaecology Community of Practice
Last Revised: 11/8/2017
Contact: South Australian Neonatal Medication Guidelines Workgroup at:
NeoMed@health.sa.gov.au

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Preparation and Administration

Intravenous

Vial Strength (mg)	Volume of Water for Injection to add (mL)	Final Concentration of cefTAZIDIME (mg/mL)
1000mg	8.9mL	100mg/mL
2000mg	8.2mL	200mg/mL

Shake the vial to dissolve the powder and wait until solution becomes clear (1 to 2 minutes)

The powder in the vial is under reduced pressure. However, as the product dissolves carbon dioxide is released and positive pressure develops. Pressure may need to be vented from the vial before withdrawing dose.

Dilution for 2g vial after reconstitution:

Add 5mL of 200mg/mL ceftazidime to 5mL of water for injection = 100mg/mL

Dose table for 100mg/mL solution:

Dose	25mg	50mg	75mg	100mg	125mg	150mg
Volume	0.25mL	0.5mL	0.75mL	1.0mL	1.25mL	1.5mL

Administer as an intravenous push over at least 3 minutes

The reconstituted solution is stable for 24 hours stored under refrigeration – check with local policy about re-accessing vial for the same patient.

Intramuscular (only for 1g vial)

Vial Strength (mg)	Volume of Water for Injection to add (mL)	Final Concentration of cefTAZIDIME (mg/mL)
1000mg	3mL	260mg/mL

Shake vigorously to dissolve.

For intramuscular use, cefTAZIDIME powder can be reconstituted with 0.5% lignocaine hydrochloride.

Intramuscular injections are painful and not recommended.

Dose	25mg	50mg	75mg	100mg	125mg	150mg
Volume	0.1mL	0.2mL	0.3mL	0.4mL	0.5mL	0.6mL

Administer as an intramuscular injection

The reconstituted solution is stable for 24 hours stored under refrigeration – check with local policy about re-accessing vial for the same patient.

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Compatible Fluids

Glucose 5%, glucose 10%, sodium chloride 0.9%

Adverse Effects

Common

Diarrhoea, vomiting, pain and inflammation at injection site, rash, Clostridium difficile-associated disease, superinfection

Infrequent

Neurotoxicity (seizures, encephalopathy) particularly with high doses and/or renal impairment, blood dyscrasias, (neutropenia related to dose and treatment duration, thrombocytopenia)

Anaphylactic shock is not commonly seen in the neonates

Practice Points

- Third generation cephalosporins should be used judiciously to minimise the emergence of resistant strains.
- CefOTAXIME or cefTAZIDIME are preferred to cefTRIAXONE where a third generaltion cephalosporin is required because cefTRIAXONE can displace bilirubin from albumin, thus precipitating kernicterus.
- CefTAZIDIME should not be mixed with gentamicin or vancomycin in the same giving set or at Y-site

Version control and change history

PDS reference: OCE use only

Version	Date from	Date to	Amendment
1.0	Nov 2012	12 Aug 2014	Original version
2.0	12 Aug 2014	11 Aug 2017	Reviewed
3.0	11 Aug 2017	**Current**	Addition of 2g vial dilution directions

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