Neonatal Medication Guideline

Clinical Guideline

Metronidazole

Policy developed by: SA Maternal, Neonatal & Gynaecology Community of Practice
Approved SA Health Safety & Quality Strategic Governance Committee on: 9 November 2017
Next review due: 9 November 2020

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

Keywords metronidazole, neonatal medication guideline, sepsis, anaerobic, C.diff, clostridium difficile, urine, leucopenia

Policy history
Is this a new policy? **N**
Does this policy amend or update an existing policy? **Y v1.0**
Does this policy replace an existing policy? **N**
If so, which policies?

Applies to
All SA Health Portfolio
All Department for Health and Ageing Divisions
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 CG041

Version control and change history

Version	Date from	Date to	Amendment
1.0	November 2012	November 2017	Original version
2.0	9 November 2017	Current	Complete review

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South Australian Neonatal Medication Guidelines

metroNIDAZOLE

5mg/mL injection, 40mg/mL oral suspension

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

Infection due to susceptible anaerobic organisms

Infectious Disease consultation is usually required prior to commencing therapy as metronidazole should be reserved for directed therapy only

Intravenous Infusion, Oral

Loading dose 15mg/kg

Followed by maintenance dose 7.5mg/kg given one dosing interval after initial dose, at frequency dosing interval indicated below:

Corrected Age (weeks) [Gestational Age PLUS Postnatal Age]	**Frequency**
≤ 26	Every 24 hours
27 - 33	Every 12 hours
34 to 40	Every 8 hours
≥ 40	Every 6 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: Health.NeoMed@sa.gov.au

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Preparation and Administration

Intravenous Infusion

The intravenous injection contains 5mg/mL metronidazole

Dose	5mg	10mg	15mg	20mg	25mg	30mg	35mg	40mg
Volume	1mL	2mL	3mL	4mL	5mL	6mL	7mL	8mL

Administer as an intravenous infusion over at least 30 minutes.

Intravenous doses may be given undiluted

Oral

The oral suspension contains 40mg/mL metronidazole

Dose	8mg	12mg	16mg	20mg	24mg	28mg	32mg	36mg	40mg
Volume	0.2mL	0.3mL	0.4mL	0.5mL	0.6mL	0.7mL	0.8mL	0.9mL	1mL

Give oral suspension at least an hour before or two hours after feeds to maximise absorption.

Compatible Fluids

Glucose 5%, sodium chloride 0.9%, glucose/sodium chloride solutions.
Glucose 10% is compatible but not recommended due to high osmolarity of the resulting solution.

Adverse Effects

Common

Vomiting, diarrhoea, thrombophlebitis (IV)

Infreque

Glossitis, stomatitis

Rare

Pancreatitis, hepatitis, optic neuritis, thrombocytopenia, Clostridium difficile-associated disease, hypersensitivity reactions (eg rash, itch, flushing, fever), anaphylactic shock, angioedema, Stevens-Johnson syndrome, leucopenia, peripheral neuropathy, seizures, dark urine (due to drug metabolites)

Prolonged treatment

Leucopenia is reversible and usually only occurs after prolonged treatment; peripheral neuropathy (usually reversible) and/or CNS toxicity (eg seizures, encephalopathy, cerebellar toxicity) are more likely

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Monitoring

> Consider periodic white cell count monitoring with prolonged treatment (>10 days)

Practice Points

> The intravenous infusion should be protected from light. Short term exposure to normal room light does not adversely affect stability, however direct sunlight should be avoided

> The intravenous infusion must not be stored in the fridge as it may crystallise out of solution. Store at room temperature

> Consider the necessity for intravenous administration as adequate levels can be achieved using oral formulations due to high bioavailability.

References

1. Dannelley J, Martin E, Chaaban H, Miller J, Review of Metronidazole Dosing in Preterm Neonates', Am J Perinatol 2017;34:833-838

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