Neonatal Medication Guideline

Clinical Guideline

Levetiracetam

Policy developed by: SA Maternal & Neonatal Clinical Community of Practice
Approved by
Safety & Quality Strategic Governance Committee on: 28 April 2017
Next review due: 30 April 2020

Summary The purpose of the Levetiracetam Neonatal Medication Guideline is to guide nursing, medical and pharmacy staff in the dosing and administration of levetiracetam.

Keywords Levetiracetam, keppra, neonatal medication guideline, seizure, epilepsy, neurology, neurologist, antiepileptic, clinical guideline, Levetiracetam Neonatal Medication Guideline

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

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

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

PDS reference CG258

Version control and change history

Version	Date from	Date to	Amendment
1.0	28 April 2017	Current	New

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South Australian Neonatal Medication Guidelines

levetiracetam

500 mg injection, 100 mg/mL oral mixture

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

Seizures on advice from a paediatric neurologist

Intravenous / Oral

Loading dose:

Initially 20mg/kg, followed by a dose of 20mg/kg repeated 12 hours later.

The requirement for a loading dose depends on the urgency with which seizure control is needed.

Maintenance dose:

Initially 10 to 12.5mg/kg/dose, which can be increased as needed every 1-2 weeks up to 60mg/kg/day.

Postnatal age (days)	Frequency
<28	Every 12 hours
>28	Every 8-12 hours

Oral administration is preferred in neonates.

ISBN number: 978-1-74243-396-7
Endorsed by: South Australian Maternal, Neonatal & Gynaecology Clinical Reference Group
Last Revised: 2/04/2017
Contact: South Australian Neonatal Medication Guidelines Workgroup at: Health:NeoMed@sa.gov.au

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levetiracetam

500 mg injection, 100 mg/mL oral mixture

Preparation and Administration

Intravenous

Dilute 3mL of the 500 mg/5mL levetiracetam injection with 17mL of compatible fluid. The resulting solution contains 15mg/mL:

Dose	15 mg	30 mg	45 mg	60 mg	75 mg
Volume	1mL	2mL	3mL	4mL	5mL

Give as an intravenous infusion over at least 15 minutes.

Oral

The oral mixture contains 100 mg/mL:

Dose	20 mg	40 mg	60 mg	80 mg	100 mg
Volume	0.2mL	0.4mL	0.6mL	0.8mL	1mL

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Sedation and irritability, increased diastolic blood pressure. Serious dermatologic reactions, such as Stevens-Johnson syndrome and toxic epidermal necrosis, have been reported.

Monitoring

Practice Points

- If ceasing therapy, the dose should be reduced gradually as abrupt withdrawal may lead to an increase in seizure frequency
- Changing from IV to oral therapy does not require any dosage conversion
- Oral levetiracetam is not affected by food

Version control and change history

PDS reference: OCE use only

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1.0	April 2017	Current	New

ISBN number: 978-1-74243-396-7
Endorsed by: South Australian Maternal, Neonatal & Gynaecology Clinical Reference Group
Last Revised: 27/04/2017
Contact: South Australian Neonatal Medication Guidelines Workgroup at: Health:NeoMed@sa.gov.au