Clinical Guideline
South Australian Neonatal Practice Guidelines – Pyridoxine

Policy developed by: SA Maternal and Neonatal Clinical Network
Approved SA Health Safety & Quality Strategic Governance Committee on:
25 February 2015
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Summary
Clinical practice guideline for the administration of pyridoxine.

Keywords
Pyridoxine, seizures, homocystinuria, peripheral neuropathy, isoniazid, sedation, hypotonia, apnoea, neurotoxicity, clinical 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

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

Staff impact
All Staff, Management, Admin, Students, Volunteers
All Clinical, Medical, Nursing, Allied Health, Emergency, Dental, Mental Health, Pathology

PDS reference
CG200

Version control and change history

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<td>1.0</td>
<td>25/02/2015</td>
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Dose and Indications

Diagnosis and treatment of Pyridoxine dependant seizures

Intravenous and oral

Initial diagnostic dose: 50 to 100mg Intravenously stops seizures within minutes

Maintenance dose: 50 to 100mg orally daily, for 2 weeks

Initial diagnostic dose is recommended with Electroencephalography (EEG) monitoring

Management of Homocystinuria

Intravenous and oral

Begin at a dose of 100mg daily, and progressively increase the dose whilst monitoring total plasma homocysteine and methionine.

Maintenance doses can range between 100mg to 1000mg daily.

Prophylaxis for peripheral neuropathy

Oral

12.5mg daily

Used in conjunction with other drugs e.g. Isoniazid
**Preparation and Administration**

**Intravenous**

<table>
<thead>
<tr>
<th>Dose</th>
<th>50mg</th>
<th>100mg</th>
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<tbody>
<tr>
<td>Volume</td>
<td>1mL</td>
<td>2mL</td>
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Administer as an Intravenous push over 2 minutes

**Oral**

For a 12.5mg dose: Crush one 25mg tablet and disperse in water for irrigation to a total volume of 5mL. The resulting solution contains 5mg/mL

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<tr>
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For a 100mg dose: Crush one 100mg tablet and disperse in small amount of water and administer the entire mixture

Administer with feeds to minimise GI irritation.

**Compatible Fluids**

Glucose 5%, Sodium chloride 0.9%

**Adverse Effects**

**Common**

Profound sedation, hypotonia and apnoea have been reported following the first dose of pyridoxine (first-dose effect).

**Infrequent**

Neurotoxicity

**Monitoring**

- Apnoea
Practice Points

> IV Pyridoxine is a Special Access Scheme (SAS) product and appropriate paperwork should be completed prior to use.

> Some patients with pyridoxine deficiency present when greater than four weeks old. All infants with infantile spasms or drug resistant seizures merit a trial of pyridoxine for two weeks.

> When using for homocystinuria, pyridoxine responsiveness should be assessed by measuring plasma methionine and homocysteine under basal conditions, and during a two to three week trial of pyridoxine, while ensuring a constant protein intake.

> Long term management should be overseen by a paediatric neurologist or metabolic specialist.

> Sometimes pyridoxine dependant seizures may not be controlled by pyridoxine (in patients with recessive pyridox(am)ine phosphate oxidase enzyme) and the active metabolite pyridoxal phosphate should be used. Consult the metabolic team in such cases.

> Doses higher than 1000mg per day in adults and 250mg per day in neonates have been associated with a sensory neuropathy and should be avoided.

Version control and change history

**PDS reference:** OCE use only

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