South Australian Neonatal Medication Guidelines

vitamin k

2mg/0.2mL injection

Synonyms

Phytomenadione, Vitamin K1, phytonadione

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Endorsed by: South Australian Maternal & Neonatal Clinical Network
Contact: South Australian Neonatal Medication Guidelines Workgroup at:
NeoMed@health.sa.gov.au

Government of South Australia
SA Health

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Dose and Indications

Prophylaxis against Vitamin K Deficiency Bleeding

Intramuscular dosing is the preferred approach. The alternative oral regime should only be offered where parents refuse the intramuscular dose.

Intramuscular (preferred method)

For neonates ≤1500grams give 0.5mg as single dose at birth

For neonates >1500grams give 1mg as single dose at birth

Oral

Oral therapy is given in up to three separate 2mg doses at:

- Birth;
- 3 to 5 days of age; and
- The fourth week of life (breastfed babies only)

This regimen has the potential for poor compliance. If using this method, the initiating prescriber must ensure that ALL doses are prescribed.

Treatment of Vitamin K Deficiency Bleeding

Intravenous, Intramuscular

Administer 1 to 2mg repeated every 4 hours when required

Administration of fresh frozen plasma to replace clotting factors will be necessary in the presence of active bleeding

Cholestasis

Intramuscular

Administer 1mg once a fortnight increasing dose as required at Neonatal Consultant discretion.

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Preparation and Administration

Intramuscular

Dose	0.5mg	1mg
Volume	0.05mL	0.1mL

Use anterolateral thigh for IM administration.

Discard remaining solution

Intravenous

Dose	0.5mg	1mg
Volume	0.05mL	0.1mL

Administer with a push over at least 30 seconds.

Oral

The injection can be used for oral administration. Each 0.2mL contains 2mg of vitamin K.

If there are any concerns that any of the oral doses are not retained (through vomiting or regurgitation within 1 hour of administration), then repeat the dose.

Compatible Fluids

Glucose 5%, sodium chloride 0.9%

Adverse Effects

Common

Pain, tenderness and erythema at injection site (intramuscular administration).

Infrequent

Hypersensitivity-like reactions with rapid intravenous administration

Rare

Hyperbilirubinaemia through displacement of bilirubin (especially in preterm infants)

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Monitoring

- Check prothrombin time when treating clotting abnormalities (A minimum of 4 hours post therapy is needed for measurable improvement)

Practice Points

- An extensive review of the medical literature has concluded that there is no association between vitamin K and childhood cancer, regardless of the route of administration. Link to parent information brochure: http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/ch38_vitamin_k_brochure_2010.pdf
- Oral prophylaxis is contraindicated in infants who are premature, unstable, on antibiotics, have cholestasis, or have diarrhoea
- Parents should receive written information during the antenatal period about the importance of vitamin K prophylaxis, and the options and relevance of oral or intramuscular prophylaxis
- A mechanism should be in place to ensure that the decision made antenatally about the method of prophylaxis is still valid and is communicated to staff caring for the mother during childbirth and postnatally. Health practitioners and institutions should ensure that appropriate informed consent procedures are in place and are followed
- Neonates experiencing birth asphyxia or bleeding problems, those born to mothers with liver disease or taking enzyme inducing anticonvulsant drugs (carbamazepine, phenobarbital, phenytoin), rifampicin or warfarin are at higher risk of vitamin K deficiency bleeding
- Neonates with cholestatic disease must be given vitamin K either intramuscularly or intravenously because oral absorption is likely to be impaired
- Vitamin K degrades in only a few hours of exposure to light. Therefore, retrieve vitamin K from imprest cupboard immediately prior to administration. Do not leave out on bench exposed to sunlight in preparation for a newborn to arrive in the Unit.

References

Joint statement and recommendations on vitamin k administration to newborn infants to prevent vitamin k deficiency bleeding in infancy 2010 http://www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/ch39_joint_statement_vitamin_k_2010.pdf

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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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