

VITAMIN K₁ (PHYTOMENADIONE) PROPHYLAXIS IN NEONATE

1. AIM

- To safely administer vitamin K (phytomenadione) to prevent Vitamin K Deficiency Bleeding Disorder (VKDB) in the neonate.

2. PATIENT

- Neonate

3. STAFF

- Medical staff, nursing and midwifery staff

4. EQUIPMENT

- Vitamin K 1 (phytomenadione) Konakion MM 2mg/0.2mL ampoule

5. CLINICAL PRACTICE

Antenatal education

- Educate and discuss with woman antenatally about Vitamin K injections for neonate.
- Provide the woman the National Health & Medical Research Council (NHMRC) *Vitamin K for Newborn Babies Information for parents* brochure (2010) (www.nhmrc.gov.au/files/nhmrc/publications/attachments/CH38_vitamin_k_web.pdf). This form is also available from Multicultural Communication in different languages.
- Document the antenatal discussion in the woman's file. If she declines Vitamin K for her neonate, document that in her antenatal record

Administration

- Ensure parental verbal consent prior to administration. Administration of this medication can be by a standing order, which must be signed by the doctor within 24 hours. Intramuscular (IM) injection is the preferred route
- Administer a single IM injection into the anterolateral thigh immediately following delivery, this may take place whilst skin to skin contact is maintained to reduce distress to the neonate
Weight <1.5 kg administer 0.5mg (0.05 mL)
Weight ≥ 1.5kg administer 1 mg (0.1 mL)
- Give Vitamin K in three separate 2mg (0.2mL) doses at birth, at 3-5 days and at 4 weeks of age if parents choose to have oral Vitamin K
- Ensure that the third dose is given no later than 4 weeks of age by GP
- Complete the letter to GP (Appendix 3) and arrange a discharge prescription from RHW pharmacy.

Note: Undertaking this form of prophylaxis requires that the parent accept responsibility and those clinicians advise them in the administration of the third dose.

Repeat the oral dose if the neonate vomits within 1 hour of an oral dose or if diarrhea occurs within 24hrs of administration

Declining Vitamin

- Counsel the woman/family about the importance of vitamin K prophylaxis by a medical officer, if the woman declines Vitamin K for her neonate
- Inform parents that decline Vitamin K of the signs and symptoms of Vitamin K deficiency Bleeding (VKDB) as outlined in the NHMRC *Vitamin K for Newborn Babies Information for parents* brochure
- Ask the parent/s to sign the Disclaimer to decline Vitamin K for neonate form

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- Ensure the following:
 - Document the counselling in the neonate's integrated clinical notes
 - File the signed Disclaimer form in the neonate's notes
 - Document the in the neonate's Personal Health Record

6. DOCUMENTATION

- NHMRC *Vitamin K for Newborn Babies – Information for parents* brochure
- Neonatal Medication chart
- Personal Health Record
- Neonatal Care Plan
- eMaternity
- Integrated clinical notes
- Discharge prescription (if baby taking oral Vitamin K)
- GP letter (if baby taking oral vitamin K) Appendix 3
- Disclaimer/Consent Form

7. EDUCATIONAL NOTES

- Oral vitamin K is contraindicated in a neonate who is:
 - preterm unwell
 - on antibiotics
 - have cholestasis
 - have diarrhea
 - mothers that have taken medications that interfere with vitamin K metabolism
- Vitamin K is essential to prevent serious bleeding.
- Babies do not get enough vitamin K from their mothers during pregnancy, or when they are breastfeeding. Without vitamin K, they are at risk of getting a rare disorder called Vitamin K Deficiency Bleeding (VKDB). VKDB can cause bleeding into the brain, and may result in brain damage or even death.
- The National Health and Medical Research Council (NHMRC) recommend the administration of Vitamin K to neonate babies to prevent VKDB.
- By the age of about six months, they have built up their own supply
- VKDB was previously known as haemorrhagic disease of the neonate.
- Early VKDB, occurring on the first day of life, is rare and confined to infants born to mothers who have received medications that interfere with Vitamin K metabolism. These include: anticonvulsants including phenytoin, barbiturates or carbamazepine; antitubercular drugs (rifampicin or isoniazid); warfarin and phenprocoumarin. The reported incidence in infants of mothers who have received such medications without Vitamin K supplementation is between 6 and 12 %.
- Classic VKDB usually occurs from one to seven days after birth and is more common in infants who are unwell at birth or who have delayed onset of feeding. The incidence reported in the literature is variable with rates of 0.25 to 1.5 % in early reports of both sick and well infants to 0 to 0.44 % in recent reviews predominately of well infants.
- Late onset VKDB occurs from 1 week to 12 weeks of age
- Pamphlets about Vitamin K are available in many languages on the NSW Health Multicultural Communication Intranet site.
- It is recommended that women taking medication which is known to interfere with Vitamin K metabolism should receive 20mg of Vitamin K for at least two weeks before birth, plus the babies should receive IMI Vitamin K immediately after birth.

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8. RELATED POLICIES/PROCEDURES/CLINICAL PRACTICE LOP

- Vitamin K 1 (Phytomenadione) standing order

9. RISK RATING

- Medium

10. NATIONAL STANDARD

- Medication Safety – Standard 4

11. REFERENCES

1. National Health and Medical Research Council (NHMRC) Joint statement and recommendations on Vitamin K administration to newborn infants to prevent vitamin K deficiency in infancy. NHMRC Statement and Recommendations. 2010.
2. National Health and Medical Research Council (NHMRC) 2010 *Vitamin k for newborn babies - Information for parents* brochure
3. www.mimsonline.com.au.acs.hcn.com.au/Search/Vitamin_K

REVISION & APPROVAL HISTORY

Reviewed and endorsed Therapeutic & Drug Utilisation Committee July 2019
Approved Quality & Patient Care Committee 4/2/16
Reviewed and endorsed Therapeutic & Drug Utilisation Committee 8/12/15
Approved Quality & Patient Safety Committee 19/9/13
Neonatal Services Division – revised 8/5/13

FOR REVIEW : JULY 2022

Appendix 1

Insert Aust Govt VITAMIN K for newborn babies Information for parents leaflet

www.nhmrc.gov.au/files_nhmrc/publications/attachments/CH38_vitamin_k_web.pdf

Disclaimer to Declining vitamin k for neonate (Appendix 2)

Neonate's Medical Addressograph

I

Mother of baby _____:

- have been given written information from the hospital about Vitamin K.
- have read about and understood why it is important for my baby to receive vitamin K.
- have discussed my choice about Vitamin K with a Doctor.
- It is my choice not to give my baby vitamin K.

I understand that I should look for signs of vitamin K Deficiency Bleeding Disorder such as:

- Any unexplained bleeding or bruising
- Signs of jaundice (yellow colouring of the skin or whites of the eyes)

I understand Vitamin K Deficiency Bleeding Disorder is a very serious condition and if these symptoms develop, or if I had any other concerns, I would immediately contact a doctor or health care professional and will alert them that vitamin K was not given to my baby at birth.

SIGNATURE (Name & signature of mother)

WITNESS (Name, signature and designation of medical officer)

Appendix 3
(Include a copy of *SESLHD Oral vitamin K form SES010.449*)