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VITAMIN K

Vitamin K is an essential vitamin for adequate blood clotting. Vitamin K deficiency bleeding occurs in approximately 1 in 10,000 babies. Hemorrhagic disease of the newborn can occur between weeks 2-12 of life. Half of these affected babies can suffer brain hemorrhage and 20% percent of these babies die. It is well established that a single dose of injected vitamin K (IM) can significantly reduce the risk of the rare occurrence of vitamin k associated bleeding.

Many families who use holistic approaches to healthcare express concerns about the use of the IM form of vitamin K. These concerns are usually related to the pain associated with the injection and the potential to interrupt the peace that is optimal for adequate initiation of breastfeeding. There have also been some reports of the link of IM vitamin K and leukemia.

As with most things in medicine, there are no definitive recommendations for the use of oral vitamin K. I have compiled several articles that look at this issue:

http://www.healthychild.com/database/are_vitamin_k_shots_necessary_.htm

<http://www.cochrane.org/reviews/en/ab002776.html>

<http://www.cps.ca/english/statements/FN/fn97-01.htm#Summary>

http://www.mercola.com/2004/may/26/vitamin_k_injections.htm

<http://www.rcp.gov.bc.ca/guidelines/Master.NB12.VitK.pdf>

<http://aappolicy.aappublications.org/cgi/reprint/pediatrics;112/1/191.pdf>

I have also been able to identify recommendations by health organizations in several countries. They are summarized as follows:

American Academy of Pediatrics: All newborns should get 0.5 to 1mg of injected vitamin K. More research is needed to assess the safety and efficacy of oral vitamin K

Canada: A single dose of oral vitamin K is not very effective, but a series of oral doses works well. Generally, 1 or 2 milligrams are given by mouth on the day of birth, at week 2, week 4, and week 6.

New Zealand: If parents do not agree to an intramuscular injection, the alternative is for the infant to receive Konakion MM[®], 2mg orally at birth. These infants should then receive a repeat oral dose (2mg) at 3-5 days and at 4-6 weeks of age. If the infant vomits or regurgitates within 1 hour of an oral dose, this dose should be repeated.

Australia: The guidelines recommend that all newborns receive an intramuscular injection of 1mg (0.1ml) of Konakion MM at birth. This is stressed as the preferred option for reliability and compliance. However, parents can elect to have the vitamin K treatment administered orally as three 2mg (0.2ml) doses of Konakion MM - given a birth, at the time of newborn screening (three to five days), and at four weeks. The advantage of the intramuscular injection is it requires no subsequent dosage to be administered. The advantage of the oral administration in three doses is that it is non-invasive and that, if 100% compliance is achieved, it may be almost as effective as intramuscular administration.

My Recommendation:

- In reading the literature that is available, it seems that the association of leukemia and IM vitamin K is weak, at best.
- IM vitamin K appears to be safe and effective.
- There seems to be a slightly greater risk of hemorrhagic disease of the newborn in babies giving a single dose of oral vitamin K relative to a single dose of IM vitamin K. This risk seems to diminish if multiple doses of oral vitamin K are given over the first 2 months of age.
- If a family chooses to not give IM vitamin K at birth, give 2mg by the oral route at following the first feeding, another 2mg at days 3-7, prior to repeating the newborn metabolic screen or before circumcision. If no second dose is given during the first week, repeat the 2mg oral dose at 2, 4 and 6 weeks. If a second dose is given during the first week, give a 2mg oral dose at 3 and 5 weeks. If the baby vomits within 1 hour of any oral dose, the dose should be repeated.