AIMS For a better birth...

Vitamin K - An Alternative Perspective

Midwife Sara Wickham provides a much-needed update on vitamin K prophylaxis.

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Childbearing women today are faced with a whole series of choices, from where they will give birth, to who might cut the cord connecting them and their baby. In the twenty-first century, an enormous range of interventions is also available, and many of these have become a 'routine' part of the care and experience offered to women.

One of these choices concerns whether a woman would like her baby to be given vitamin K, either orally or by intramuscular injection. This has been an option in most areas for over thirty years, and it is perceived by the medical profession to be an important prophylactic measure in preventing haemorrhagic disease of the newborn.

The evidence which the medical (and midwifery) professions use to support their arguments for all babies receiving vitamin K is widely available - and will be repeated many times to women who are considering declining this intervention. Because of this, there seems little point repeating this here. Instead, I would like to present some of the 'alternative' arguments, in the hope that offering an alternative perspective will enable women to look at both sides of the debate and be more able to make informed choices in this area.

The information that most women are given goes something like this:

> *"In this hospital we offer all babies vitamin K. The reason for this is that all babies are born with low levels of vitamin K. Babies need vitamin K to prevent haemorrhagic disease, which can cause serious complications. There are also low levels of vitamin k in breastmilk, so if you choose oral vitamin K and are breastfeeding we will give your baby three doses of vitamin K rather than the one which we give to formula-fed babies. (Formula contains the high amounts of vitamin K which babies need.)"*

Midwives (or doctors) may then go on to explain the different routes by which vitamin K can be given, and some also discuss the possible link - which needs further research - between intramuscular vitamin K and childhood cancer. A study published in the British Medical Journal in May 2001 showed a range of seven distinctly different policies on the administration of vitamin K within the UK; the authors state that there is "no clear consensus" on this (Ansell et al 2001).

Whatever the clinical issues, a number of philosophical questions are also raised by the 'facts' above, and

these form an important part of the alternative viewpoint on vitamin K.

'Fact' 1: All babies are born with low levels of vitamin K.

'Low' in relation to whom? If all babies have low levels, then who has the 'normal' levels against which this is measured? Well, believe it or not, only adults are perceived by the medical profession to have normal levels of vitamin K. Yet there is a big gap between noticing that babies have relatively lower levels than adults and deeming this a pathological condition which needs routine treatment.

Babies also have large heads relative to adults, but this is not perceived as pathological. This is deemed a good thing, because the human brain needs to be large at birth. Why is the fact that relative vitamin K levels differ between newborn and adult perceived as pathological?

Philosophically, the question is raised that, if all babies have what is perceived as a 'low' level of vitamin K, then in reality this must be the 'normal level' of vitamin K for babies to have. Even if proponents of vitamin K think that this is 'too low' a level for some reason, they should say this, rather than telling women their baby is deficient in an essential substance. Otherwise, this just reinforces the idea that women are relatively inefficient at making babies and need to be supplemented by the skills and technology of hospitals and doctors.

'Fact' 2: Babies need vitamin K to prevent late-onset haemorrhagic disease, which can cause serious complications.

There is no doubt that some babies suffer from late-onset haemorrhagic disease (HDN), and there is also no doubt that this can be dangerous for some babies. But does this mean that all babies should be given vitamin K? The risk of a baby who is not given vitamin K developing HDN is between 1 in 10,000 and 1 in 25,000 (Von Kries and Hanawa 1993). We also know that the babies most at risk from HDN are those who have traumatic births (clinically, this might include babies who are delivered by forceps, ventouse or emergency caesarean section, or babies who show bruising).

Babies who are born physiologically, or without undue trauma, are at the very lowest risk of developing HDN. Of course, there are never any guarantees either way; there is still a risk that a baby who is born physiologically will develop HDN, just as there is a risk that a baby given vitamin K may still develop HDN, or suffer from other side effects.

For example, the risk of healthy babies developing cancer as a result of being given vitamin K may be higher than the risk of developing HDN without (Parker et al 1998, Passmore et al 1998). Anecdotal evidence suggests that babies given vitamin K may be more at risk from jaundice, which may lead to the need for interventions. Unfortunately, we need much more research evidence in order to assess these relative risks and offer women statistics concerning every aspect of this decision (Slattery 1994, Wickham 2000).

Von Kries (1998) points out that some of the babies who are diagnosed as having HDN caused by vitamin

K deficiency actually have HDN caused by underlying cholestatic disease (where there is a stoppage or suppression of bile flow). Even if giving vitamin K to these babies could prevent the development of HDN, we should not be saying that they have HDN because they were not given vitamin K.

This just confuses and confounds the issue and is a bit like saying that someone who was hit on the head by a block of wood has a headache because they weren't given an aspirin. The idea of giving vitamin K to all babies may then be akin to the suggestion that we should all take an aspirin before going outside just in case we are hit on the head by a block of wood.

'Fact' 3: There are also low levels of vitamin K in breastmilk; Formula contains the high amounts of vitamin K which babies need.

As with the levels in the babies' bodies, the 'low' label is only applied to breastmilk when the levels of vitamin K in breastmilk are measured in relation to the levels of vitamin K in cow's milk. This immediately begs the question of whether you believe that breastmilk (like other aspects of women's physiology) is a wondrous substance which provides all that your baby needs, or whether it is a poor alternative to cow's milk?!

To compound this, the research which first suggested that breastmilk was relatively low in vitamin K was carried out at a time when women were told to restrict the number of feeds, apply limits to the time the baby spent on each breast and, in some areas, to express colostrum without giving this to the baby. The net result of this was a reduction in the amounts of fat-rich colostrum and hindmilk which babies were receiving. Vitamin K is fat-soluble and so is found mostly in colostrum and hindmilk, which puts an entirely different perspective on whether breastmilk is truly low in vitamin K or not.

Even if breastmilk is low in vitamin K (compared to cow's milk), is this pathological? Who do you believe knows the most about how to feed human babies? Cows, formula manufacturers, or women? Call me too trusting of nature if you like, but it seems to me that, if babies are born with 'low' levels of vitamin K relative to adults, and if breastmilk might contain 'lower' levels in relation to cows' milk, then maybe babies don't really need that much vitamin K? Which then begs the question of whether it is a good idea to put it into their bodies?

Perhaps babies' level of vitamin K serves them well, possibly preventing the development of clotting problems during birth and in the first few weeks of life? Of course, it may also be that medical intervention and the poor standard of the breastfeeding research has reduced our perception of the levels of vitamin K and that these would be higher both in babies and breastmilk which was not interfered with.

Other factors may also affect this issue. The length of time the cord is allowed to pulsate affects the baby's blood volume and composition; women wishing to avoid vitamin K may want to plan a physiological third stage. Nutrition during pregnancy is important for lots of reasons, one of them being that a woman who eats well knows that she is giving her baby all of the essential nutrients to grow in the way it needs to and manufacture the substances it needs.

In general, babies are born with pretty much everything they need. The length of their umbilical cords almost always enables them to reach their mother's breast to suckle while their placenta is still attached inside her uterus. That's not a coincidence. Neither is the way the hormones of labour help the mother and baby to begin to fall in love with each other. For the majority of babies, birth works very well. For the minority of babies who are at increased risk of HDN, vitamin K may well be a good idea. As above, women need to weigh up the different perspectives on vitamin K and determine the right decision for them and their babies.

Note: Some parts of article have been adapted from an article published by Midwifery Today. The original reference for this is given below; it has also been published on Sara's website:www.sarawickham.com

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