
Readers Forum

Safety of Vitamin K in Newborns

Q. Is Vitamin K prophylaxis safe in newborns?

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A. The American Academy of Pediatrics has recommended that vitamin K prophylaxis should be given to all newborn babies because of the potential risk of hemorrhagic disease of the newborn. The question whether oral vitamin K prophylaxis is as effective as intramuscular vitamin K is still controversial. The initial concern regarding the safety of parenteral vitamin K has been by and large resolved.

The water soluble preparation of vitamin K, i.e., menadione sodium bisulfite has the potential risk of causing hemolysis when given in "toxic" doses especially in preterm babies. In a developing country like India, parenteral administration of vitamin K is not only associated with the risk of sepsis but also there is a potential risk of transmission of viral infections, such as hepatitis B and HIV.

The controversy regarding the association between intramuscularly administered vitamin K with the development of lymphoreticular cancers has been resolved. Golding *et al.*(1) reported a significant association between intramuscular vitamin K and cancer when compared to no vitamin K or oral vitamin K. This has not been supported by data from the United States where routine prophylaxis with vitamin K

was introduced in 1961 and there has been no increase in the annual incidence of childhood leukemia(2). There has been no such trend in Australia either(3). Reports from Sweden(4) and Denmark(5) suggest that the alleged risk if any cannot be as high as documented by Golding and colleagues(1). Two recent case control studies(6,7) have refuted the increased risk of cancer associated with intramuscular administration of vitamin K.

Vitamin K prophylaxis is therefore safe in newborn babies. The use of oral vitamin K prophylaxis would be more feasible and desirable in India, if a suitable oral preparation is made available in the form of oral drops. However, single one time dose of intramuscular vitamin K offers the advantage of compliance and it also protects against the occurrence of late-onset hemorrhagic disease of the newborn.

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