



# Hemorrhagic Disease of the Newborn

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In 1997, the Canadian Paediatric Society revised its recommendations on the administration of vitamin K to newborn babies to prevent hemorrhagic disease of the newborn (HDNB). Although the previous guideline indicated that oral vitamin K prophylaxis was equivalent to intramuscular (IM), epidemiologic evidence suggested an increased relative risk of HDNB by a factor of 6.15 (the current guideline contains a typographical error, identifying this risk as increased by 8.15).

Information used in revising this recommendation was primarily based on evidence from Australia and Western Europe, since no Canadian data was available. Although Canadian centres that had used oral vitamin K prophylaxis for healthy term infants for several years indicated they were not seeing HDNB, it was unclear what credence could be given to these observations, especially as the principal concern was late HDNB (three to eight weeks of age).

While oral administration of vitamin K may be preferred by parents and physicians over an IM injection, and while Canadian babies could potentially differ from babies in Australia and Western Europe in terms of factors that may affect risk of HDNB, the evidence from other countries compelled the CPS to recommend that vitamin K be given IM following birth.

To obtain further information on the incidence of HDNB, this disease was added to the Canadian Paediatric Surveillance Program (CPSP) studies in 1997. Of the 10 reports received in 1997, two were discarded because the events occurred in previous years, one was discarded because it was submitted in error with another diagnosis, and one was a duplicate. One baby had confirmed HDNB following birth at home with no vitamin K prophylaxis, while another baby had probable HDNB following oral administration of vitamin K. Additional cases included one baby with Factor VIII deficiency, one with laboratory evidence which suggested disseminated intravascular coagulopathy, one diagnosed as vitamin K deficiency who had a normal prothrombin time (suggesting another diagnosis), and one with abnormal bleeding following a circumcision for whom no coagulation studies were obtained.

Incidence of HDNB in babies receiving oral vitamin K following birth cannot be calculated, as the number of babies treated is unknown. However, it is important for paediatricians who participate in the CPSP to provide information on this relatively uncommon but serious condition (50% of babies with late HDNB have intracranial hemorrhage) to determine if more definitive studies need to be initiated.

RESOURCES



Practitioners would benefit from guidance in the diagnosis of bleeding disorders in the newborn to differentiate bleeding associated with vitamin K deficiency from other causes and assist in the subsequent care of these children. This issue was addressed in an article in *Paediatrics & Child Health*.<sup>1</sup>

Through their active participation in the surveillance program, paediatricians can help identify areas for educational guidelines and also contribute information upon which patient recommendations can be made. Thanks are extended to all participants whose extra work has helped support the Canadian Paediatric Surveillance Program.

### Reference

1. DD McMillan, J Wu. Approach to the bleeding newborn. *Paediatr Child Health* 1998;3(6):399-401.