

Hemorrhagic disease of the newborn: Is there a risk in not following recommended guidelines?

You are on call in the emergency room, and a five-week-old infant presents with apnea and convulsive movements. While shaken baby syndrome may be your initial thought, hemorrhagic disease of the newborn (HDNB), rare though it is, should be on your differential diagnosis list. This breastfed infant did not receive vitamin K following an unplanned homebirth. Work-up confirmed an intracranial bleed with coagulation study results characteristic of HDNB (international normalized ratio > 1.4); the infant has sustained permanent neurological sequelae.

To help prevent such tragedies, the Canadian Paediatric Society and the College of Family Physicians of Canada, in 1997, revised guidelines (1) on the intramuscular administration of vitamin K to newborn infants based on concerns in Germany, the United Kingdom, Sweden and Australia that the use of oral vitamin K may be associated with an increased incidence of late HDNB, and that a few infants do not receive vitamin K following birth. In four years, the Canadian Paediatric Surveillance Program (CPSP) HDNB study captured only five confirmed cases: two patients received vitamin K intramuscularly, according to the Canadian guidelines; two patients did not receive vitamin K following homebirths; and one patient was given oral vitamin K but also had biliary atresia. With 1.5 million births in Canada during the study period, these results confirm the low incidence of HDNB in infants. Although HDNB is not common and the use of oral vitamin K is very limited, the above numbers clearly illustrate the value of responses from participants involved in the CPSP to help determine the rarity of HDNB and the merit of the revised guidelines. Should Canada experience what is currently happening in the United Kingdom with either parental refusal of administration of vitamin K or an increase in oral vitamin K use that results in an increase in the number of HDNB cases, the CPSP may need to revisit this study to address such critical issues.

REFERENCES

1. Canadian Paediatric Society and the College of Family Physicians of Canada. Routine administration of vitamin K to newborns. *Paediatr Child Health* 1997;2:429-31. <<http://www.cps.ca/english/statements/FN/fn97-01.htm>> (Version current at April 4, 2001)

The Canadian Paediatric Surveillance Program is a joint project of the Canadian Paediatric Society and Health Canada's Centre for Infectious Disease Prevention and Control that undertakes surveillance of rare diseases and conditions in children. For more information, visit <<http://www.cps.ca/english/proadv/cpsp/cpsp.htm>> or <<http://www.cps.ca/francais/proadv/pcsp/pcsp.htm>>