

Is the risk of kernicterus rising?

At a local follow-up clinic, a four-day old infant boy of southeast-Asian origin presents with jaundice, lethargy and poor sucking when breast-fed. He is icteric without hepatosplenomegaly, hypotonic but not toxic, and has lost 7.5% of his birth weight. Initial investigations reveal a normal complete blood count (CBC), a serum bilirubin of

450 mmol/L, a negative Coombs test, identical A positive mother-son blood group, and a positive glucose-6-phosphate dehydrogenase screening test (G6PD). The infant is treated with frequent breast feedings, double phototherapy and intravenous fluids. The jaundice progressively declines with a parallel increased weight gain.

LEARNING POINTS

- Severe neonatal hyperbilirubinemia carries the risk of significant long term morbidity with athetoid encephalopathy and sensorineural hearing loss.
- The incidence of kernicterus secondary to Rh incompatibility was highest between 1940 and 1950, before the use of Rh immunoglobulin and exchange transfusions.
- The need for phototherapy is one of the most common reasons for readmission of newborn infants, with the majority being otherwise healthy, breast-fed and without hemolytic diseases.
- All infants with significant neonatal jaundice need to be assessed ideally before treatment regarding etiology with a minimum of: a serum bilirubin (total and direct); CBC, smear, and blood group; Coombs test; and G6PD test.
- G6PD deficiency is an X-linked disorder affecting 3.4% of the world's population. The incidence is higher in the Mediterranean and Middle East and reaches 15% to 26% in Africa and Southeast Asia.
- Qualified health care providers should reassess newborns for jaundice and dehydration within 48 h of early discharge from hospital.
- The CPSP hyperbilirubinemia study collects epidemiological data to identify the need and value of risk reduction strategies like routine cord blood screening for blood group typing, Coombs analysis and G6PD deficiency testing.

The Canadian Paediatric Surveillance Program (CPSP) is a joint project of the Canadian Paediatric Society and Health Canada's Centre for Infectious Disease Prevention and Control that undertakes the surveillance of rare diseases and conditions in children. For more information visit our Web site at <www.cps.ca/english/cpsp> or <www.cps.ca/francais/pcsp>.