A full-term male infant was admitted to the neonatal intensive care unit 30 h after birth for hypoglycemia. A review of the history revealed that the mother was a primagravid 30-year-old woman with obesity (body mass index 35 kg/m²) who had a normal glucose tolerance test at 28 weeks’ gestation. The baby was born by spontaneous vaginal delivery after induction of labour at 41 weeks’ gestation. Apgar scores were 8 at 1 min and 9 at 5 min. Cord blood gases were normal. Birth weight was 2900 g. The mother and newborn were transferred to the postnatal ward. Newborn examination was normal. During the first 24 h, the baby had several breastfeeding attempts with good latch and sustained sucking. The baby had two wet diapers, one small meconium stool and weight was 2800 g at 24 h. At 30 h of life, he had a temperature of 36.3°C and was noted to be jittery, with exaggerated star-tle, and subsequently experienced a cyanotic episode. A bedside glucose measurement was low. A simultaneous serum glucose measurement was 0.9 mmol/L. The baby was admitted to the neo-natal intensive care unit and treated with intravenous dextrose 10% 2 mL/kg slow bolus and 6 mg/kg/min glucose maintenance. Infection was ruled out. There were three additional episodes of low glucose (1.8 mmol/L, 1.9 mmol/L and 2.0 mmol/L). A critical sample obtained during the third hypoglycemic event indicated hyperinsulinism. Hypoglycemia and hyperinsulinism resolved four days later, and he was discharged home feeding well with a normal neurological examination.

LEARNING POINTS

• The present case vignette describes a newborn who warranted glucose monitoring because of growth restriction and developed severe symptomatic hypoglycemia, likely secondary to transient hyperinsulinism.
• Monitoring recommendations, such as those published by the Canadian Paediatric Society in 2004 (1), are used for early detection of hypoglycemia in at-risk term newborns, including those who are growth restricted. The infant in the present case was less than the 10th centile for birth weight; thus, glucose monitoring was warranted (2). Use of fixed birth weight cut-offs for glucose monitoring, such as birth weight <2500 g, has resulted in missed cases (3).
• A significant number of hypoglycemic newborns do not fit within currently used risk categories (3). However, universal glucose monitoring is not appropriate because as many as 14% of healthy term newborns experience transient hypoglycemia, which does not appear to cause harm (4).
• A Canadian Paediatric Surveillance Program project has recently been launched, targeting significant hypoglycemia in term newborns who did not warrant monitoring under current guidelines.
• The Canadian Paediatric Surveillance Program project will be a step to probe conditions, such as maternal obesity, excessive weight gain in pregnancy or hypertension, among others, as potential risk factors that warrant glucose monitoring.
• Future clarification of unrecognized or underappreciated risk factors will improve both the prevention and early detection of neonatal hypoglycemia.

REFERENCES