Umbilical cord haematoma and adrenal haemorrhage in a macrosomic neonate with anaemia

Ryan Michael McAdams, Shilpi Chabra

Department of Pediatrics,
University of Washington,
Seattle, Washington, USA

Correspondence to
Dr Ryan Michael McAdams,
mcadams@uw.edu

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DESCRIPTION

A 32-year-old G2P1 female without a history of diabetes or infection vaginally delivered a full-term 4800 g (99th centile), large for gestation age male with complications of shoulder dystocia. On day 1, blood was noted to ooze from his clamped umbilical cord (UC) with a darkish bulge noted near its insertion site (figure 1), consistent with a UC haematoma. Platelet count and coagulation studies were normal. The haematocrit was initially 37%, but decreased to 32.1%.

On day 2, a bluish discolouration was noted in the supraumbilical region (figure 2), which did not correspond to any abdominal radiograph or ultrasound (US) findings. Incidentally, an avascular cystic lesion (23×20×12 mm; 2.9 mL) was seen on US in the right suprarenal region suggesting adrenal haemorrhage (AH). The asymptomatic neonate was discharged home (day 3) with a haematocrit of 34.2%. Follow-up US studies demonstrated the same cystic lesion with increased internal echoes

Figure 2 Bluish discolouration at the supraumbilical region.

Figure 1 Umbilical cord haematoma.

(figure 3) consistent with an evolving right AH (day 10), which resolved by day 30.

Macrosomia (birth weight >4500 g) is commonly associated with birth complications including shoulder dystocia, hypoglycaemia and intra-abdominal organ injury, such as AH, which may cause postnatal anaemia.^{1 2} Similarly to this case, AH is often asymptomatic unless large or bilateral. UC haematoma, a rare pregnancy/labour complication, may be associated with fetal morbidity and mortality. Risk factors include infection and/or trauma associated with invasive procedures/birthing process, with the majority associated with venous vascular wall alterations with and without an associated inflammatory vasculopathy.³ In this case, the supraumbilical discolouration was most likely due to blood tracking from the UC haematoma along the umbilical fascial plane.

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Figure 3 Abdominal ultrasonography showing a cystic-appearing hypoechoic heterogeneous mass consistent with right adrenal gland haemorrhage. There was no vascular abnormality on Doppler examination.

Learning points

- Macrosomia increases the risk for birth complications such as adrenal haemorrhage and, although not previously reported, may be a risk factor for umbilical cord haematoma, which emphasises the importance of careful evaluation of internal organs in cases of birth trauma where umbilical cord haematoma is also present.
- Following a difficult delivery, the presence of postnatal anaemia in a macrosomic newborn should raise suspicion of an adrenal haemorrhage.
- Abdominal ultrasound can be a valuable early diagnostic tool in patients with suspected umbilical cord haematomas to evaluate the proximal umbilical cord to exclude other abnormalities (eg, omphalocele) and to assess for intra-abdominal organ injury, such as adrenal haemorrhage.

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