Neonatal Adrenal Haematoma Following Uncomplicated Spontaneous Vaginal Birth Presenting with Feeding Difficulties and Weight Loss

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Introduction

Neonatal adrenal haematomas (NAH) are rare, with variable reported frequencies from 1.7-2.1[1] to up to 29 per 1,000 births[2]. Presentation can include severe jaundice, acute adrenal insufficiency, anaemia[3] and even haemodynamic instability,[4] with asymptomatic cases being increasingly recognised. NAH usually accompany a complicated vaginal delivery, intrapartum hypoxia, infection, traumatic delivery, coagulopathy and macrosomia.[2] However, relying on the absence of risk factors to exclude is likely to miss the diagnosis in some babies. This case is the first to the authors' knowledge of presentation primarily with poor feeding, persistent vomiting, and weight loss.

Aim

To describe a case of a large 49 mm left-sided NAH following uncomplicated vaginal delivery of an average for gestational age neonate which presented with poor feeding and weight loss at 6 days of age. Written informed consent was granted by the mother on behalf of herself and her baby.

Case

A 29-year-old G2P1 was induced at 38 weeks and 3 days for gestational diabetes requiring insulin with suboptimal glycaemic control. A male baby was born by uneventful unassisted vaginal birth following a 25-minute 2nd stage. Apgars were 8 and 9 at 1 and 5 minutes respectively. Venous cord gases, collected for cardiotocography features of possible distress, were unremarkable, with pH 7.35 and lactate 3.1. Weighing 3.31kg (58%), this baby received intramuscular vitamin K at one hour postpartum and was discharged at 24-hours old, although he was 'unsettled', and community follow-up was arranged.

This baby represented to the emergency department at 6 days old with 17% weight loss since birth and vomiting. Ultrasound revealed a 49mm left adrenal haematoma causing mass effect on the gastric body and left kidney (see figure 1). Other viscera, adrenal endocrine function, and haemodynamics all remained normal. The haematoma was managed conservatively, with cares involving feeding support and temporary nasogastric feeds.

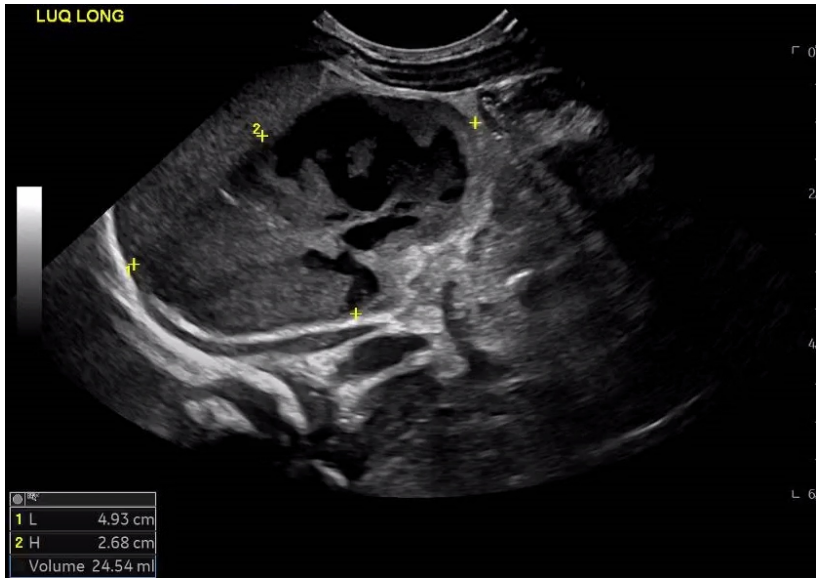

Figure 1: Ultrasound appearance of adrenal haematoma at presentation, measuring 49mm by 35mm by 27mm initially. Mass effect on an anatomically normal stomach was noted.

Results:

Serial ultrasound demonstrated reduction in size to 39mm at 8 days old, 20mm at 7 weeks, 13mm at 12 weeks and completely resolved at 6 months (see figure 2). This baby's growth progressed well with mixed feeding with no apparent sequelae at 6 months old.

Discussion:

This case demonstrates that even a non-instrumental vaginal birth without fetal hypoxia or macrosomia can precipitate injuries which would likely have been undiagnosed before improvements in ultrasound availability and resolution.

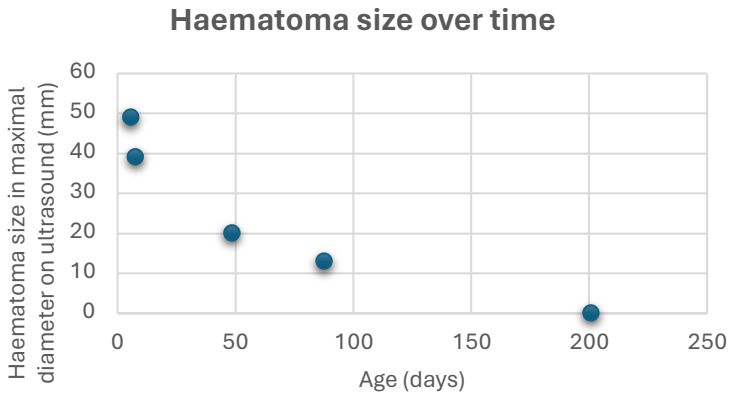

Figure 2: Change in adrenal haematoma size (in maximal diameter in mm) over follow-up period (infant age in days), with rapid then gradual reduction in size until it was no longer noted on ultrasound at just over 6 months of age.

References

1. Trutin I, Valent Morić B, Borošak J, et al. Does Urinary Tract Ultrasound Have Its Place in the Treatment of Early Neonatal Jaundice? Neonatal Bilateral Adrenal Hemorrhage: Case Report. *Acta Clin Croat* 2018; 57: 161-165. 2018/09/27. DOI: 10.20471/acc.2018.57.01.21.
2. Hammami O, Khamassi I, Jelassi A, et al. Bilateral neonatal adrenal hematoma. *Journal de pédiatrie et de puériculture* 2023; 36: 303-306. DOI: 10.1016/j.jpp.2023.05.009.
3. Fadil FZ, Lehlimi M, Chemsi M, et al. Neonatal adrenal hematoma: various modes of presentation. *Arch Pediatr* 2014; 21: 990-994. DOI: 10.1016/j.arcped.2014.06.004.
4. Kim HH, Jang W and Kim JK. Neonatal massive adrenal hemorrhage with scrotal hematoma progressing to hypovolemic shock. *Pediatrics and neonatology* 2023; 64: 472-473. DOI: 10.1016/j.pedneo.2022.12.006.