ADRENAL HAEMORRHAGE IN A NEWBORN

Shalini N[1], Rohani AJ[1], Neoh SH[1], Cheah IGS[1], Che Zubaidah[2]

1. Neonatology Unit, Paediatric Insitute, Hospital Kuala Lumpur, Malaysia
2. Paediatric Radiology, Paediatric Institute, Hospital Kuala Lumpur, Malaysia

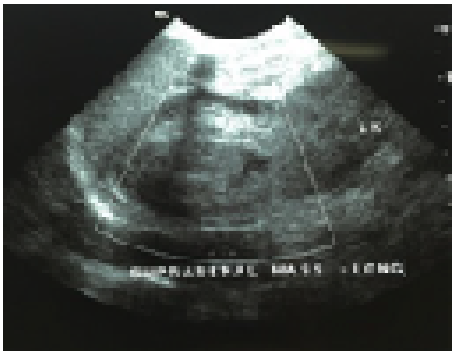
Introduction

Adrenal hemorrhage (AH) is a relatively uncommon condition (0.55-1.9%) during the neonatal period [1]. The adrenal gland is vulnerable to haemorrhage because of its large size and high vascularity. Clinical features of AH are variable and nonspecific. AH in a newborn can present as anemia, hyperbilirubinemia, abdominal mass, painful swelling or hematoma of the scrotum, acute adrenal crisis or shock [2]. We report such a case of adrenal haemorrhage in a newborn.

Case Discussion

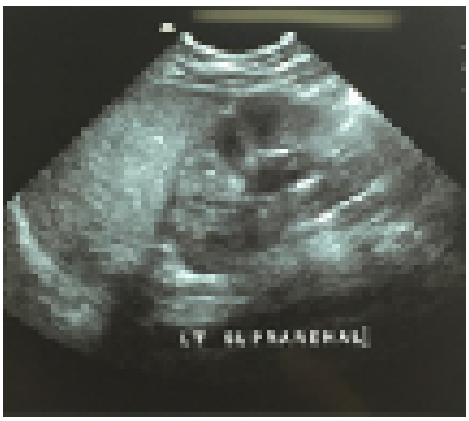
A baby boy, B/O I.A, was born of term gestation via vacuum assisted delivery with a birth weight of 3300 gram. During routine newborn screening at day 2 of life, he was noted to be pale. A vague, ballotable, non-tender mass was palpable at his left flank. A bedside ultrasound showed a left suprarenal mass. Haemoglobin on admission was 7.1 g/dL. Packed cell was transfused. Renal function was normal. Abdominal ultrasound showed a heterogeneous hyperechoic left suprarenal lesion, measuring 2.0 x 3.5 x 4.2 cm with a hypoechoic rim compatible with adrenal haemorrhage. No calcification or vascularity was demonstrated within the mass (Figure 1).

Figure 1. Hyperechoic L suprarenal mass



Vital signs and blood sugar monitoring were normal during his stay in the SCN. He developed mild jaundice at day 4 of life and was treated with phototherapy. Full blood picture showed normochromic normocytic anemia. TORCHES screening were normal. Parvovirus was not detected. Urine catecholamines were normal. The adrenal haemorrhage was treated conservatively. Subsequent abdominal ultrasounds showed complete resolution of the haemorrhage by 4 months of age (Figure 2).

Figure 2. Complete resolution 4 weeks later



Discussion

Neonatal AH is a well-known clinical entity. Predisposing factors include birth trauma, prolonged labor, hypoxia, asphyxia, shock, septicemia, and hemorrhagic disorders. The clinical presentation is variable. Infants may be asymptomatic, with the diagnosis made incidentally. The most common clinical symptoms are poor feeding, vomiting, persistent jaundice, anemia, and abdominal mass [3]. The adrenal gland is vulnerable to mechanical compression and venous pressure changes at birth. The right adrenal gland is involved 3–4 times more often than the left, due to its greater likelihood of compression between the liver and spine. Since the right adrenal vein usually drains directly into the inferior vena cava, compression is likely to induce venous pressure changes [1,3,4]. Other differential diagnoses of lesions near the adrenal gland include adrenal cyst or abscess, neuroblastoma and others. The ultrasound images vary at different stages. In the early stage, adrenal hemorrhage appears solid and echogenic. As liquefaction occurs, the mass demonstrates mixed echogenicity with cystic changes.

Conclusion

AH can be very subtle as it is an occult bleeding that contributes to anemia and can progress to shock. An accurate diagnosis of AH requires radiological imaging and close follow up. Surgical exploration should only be considered if imaging is suggestive of malignancy [3]. Sinister causes for AH such as adrenal tuberculosis or meningococcaemia should be highly considered. AH rarely leads to adrenal insufficiency in term newborns. Neonatal AH is usually self-limiting with spontaneous resolution [1,3] usually between 3 weeks to 6 months [2].

References

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