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Case Report

Adrenal haemorrhage in new born presenting as severe neonatal jaundice

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ABSTRACT

Neonatal adrenal haemorrhage is a relatively uncommon. Most often associated with difficult labour, birth trauma, hypoxia, sepsis. Clinical manifestations may vary from asymptomatic to life threatening Addisonian crisis. We present a case of right subacute adrenal hematoma confirmed on MRI abdomen. Risk factor being birth asphyxia. He presented with neonatal jaundice and was managed successfully by conservative methods. Treatment depends on the clinical features and severity. Most of the cases are asymptomatic and managed conservatively. Infants with acute haemorrhage might need urgent blood transfusion. Laparotomy is indicated when haemorrhage seems to be continuing, especially when the exact site of haemorrhage is in doubt. Adrenal haemorrhage usually takes 3 weeks to 6 months to resolve completely. Our case was clinically and hemodynamically stable, so he was managed conservatively and discharged after a week. This case emphasizes the importance high degree of suspicion in evaluation of neonate presented with late onset jaundice and importance of ultrasonography in diagnosis and conservative management.

Keywords: Adrenal haemorrhage, Birth asphyxia, Neonate, Neonatal Jaundice, Ultrasound abdomen

INTRODUCTION

Adrenal haemorrhage during the neonatal period is very rare. Most often associated with difficult labour, birth trauma, hypoxia, sepsis.[1] Clinical manifestations may vary from asymptomatic to benign as anaemia, flank mass, discoloration of scrotum, neonatal jaundice to life threatening Addisonian crisis depending upon the extent of haemorrhage.[2]

We present a case of right subacute adrenal hematoma confirmed on MRI abdomen. Risk factors being birth asphyxia, overwhelming sepsis. He presented with neonatal jaundice and was managed successfully by conservative methods.

CASE REPORT

A 5 days old male term neonate of weight 2.9 kg who was exclusively breastfed was brought with yellowish discoloration of palms and soles for past 2 days with normal coloured stools. He was born of a nonconsanguineous marriage via forceps assisted vaginal delivery in view of obstructed labour. He required resuscitation in form of positive pressure ventilation with bag and mask for 1 minute. Soon after delivery he developed respiratory distress, so he received oxygen by nasal prongs, IV antibiotics as his sepsis screen was positive and he had neonatal seizures and received phenobarbitone. He was discharged on day-2 of life with diagnosis of birth asphyxia with hypoxic ischemic encephalopathy.

On examination a small cephalohematoma over parieto-occipital area, no mass per abdomen.

His investigations revealed serum bilirubin 22 mg/dl with direct bilirubin 4.7 gm/dl. Direct hyperbilirubinemia can be explained by overwhelming sepsis. He received intensive phototherapy for jaundice. There was ABO incompatibility with mother group-B positive, baby group- AB positive. His corrected retic count is 1.4%, Direct coombs test was negative, peripheral smear showed leukopenia. In view of severe anaemia, Hb-10 gm/dl, he received blood transfusion.

He received antibiotics for overwhelming sepsis of Carbapenem resistant Acinetobacter boumanni. In view of feed intolerance, he was evaluated with USG abdomen which incidentally revealed a well-defined lobulated heteroechoic area seen involving one limb of right adrenal gland measuring 2.5 cm/1.9 cm/1.1 cm (volume-3 ml) adrenal haemorrhage. Adrenal haemorrhage was not considered as the primary diagnosis in our case before abdominal sonography. MRI abdomen revealed features of subacute right adrenal haemorrhage. Focal soft tissue lesion seen replacing the right adrenal gland of mixed signal intensity appearing hyperintense on T1/T2w images with surrounding T2 hypo intensity which shows blooming on GRE images suggesting subacute adrenal haemorrhage. It measures 1.4/1.7/2.3 cm. It is seen abutting the superior pole of the right kidney.

He was clinically and hemodynamically stable, so he was managed conservatively and discharged after a week.

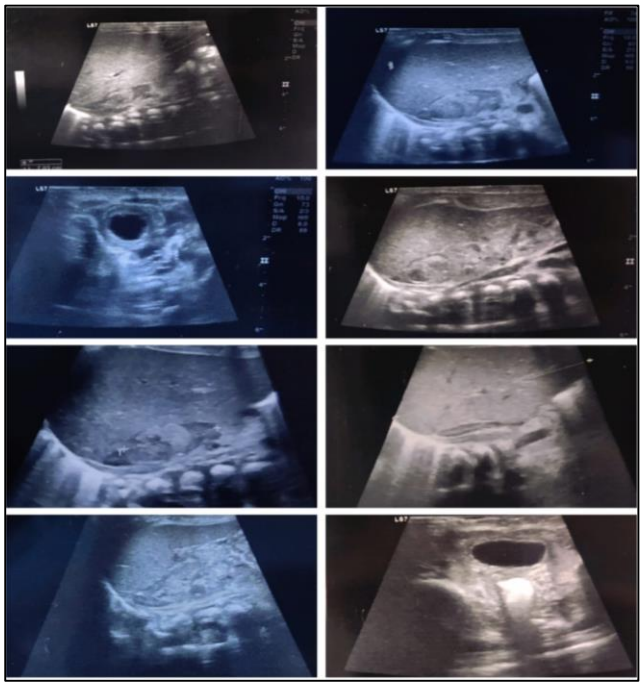

Figure 1: USG abdomen shows a well-defined lobulated heteroechoic area seen involving one limb of right adrenal gland measuring 2.5/1.9/1.1 cm (volume-3 ml) adrenal haemorrhage.

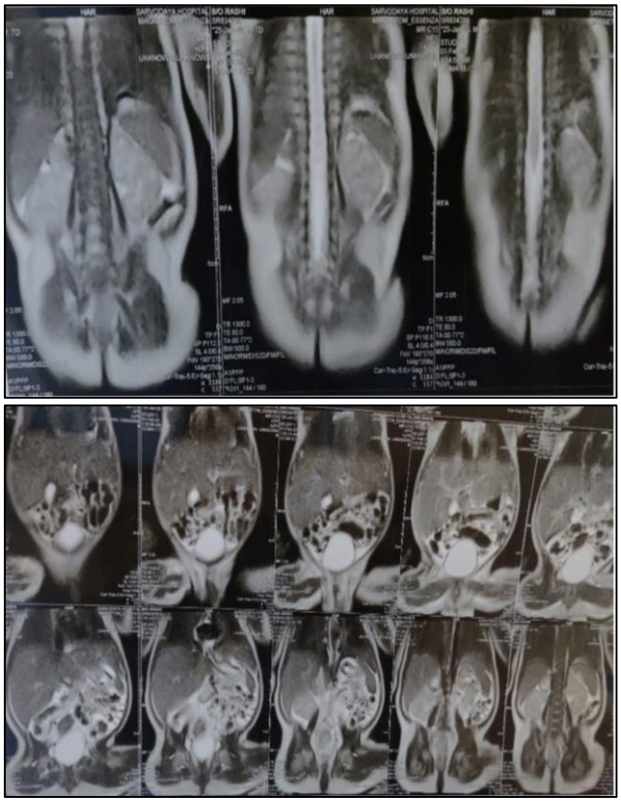

Figure 2: MRI abdomen revealed features of subacute right adrenal haemorrhage. Focal soft tissue lesion seen replacing the right adrenal gland of mixed signal intensity appearing hyperintense on T1/T2w images with surrounding T2 hypo intensity which shows blooming on GRE images suggesting subacute adrenal haemorrhage. It measures 1.4/1.7/2.3 cm. It is seen abutting the superior pole of the right kidney.

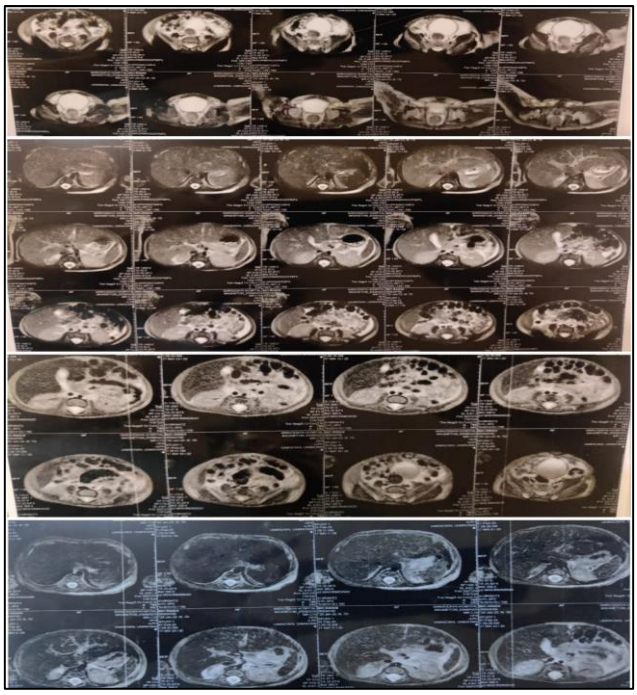

Figure 3: MRI abdomen.

DISCUSSION

Neonatal AH is a relatively rare condition with incidence ranges from 1.7 to 2.1 per 1000 births but the real occurrence is probably higher as bleeding may remain asymptomatic.[3] The unique vascular supply and large size compared to body weight makes adrenal vulnerable to haemorrhage. The 90% of the cases are unilateral and 75% of the cases occur on the right side.[4] Since the right adrenal vein drains directly into the inferior vena cava, compression of the right adrenal gland between the liver and the spine induces venous pressure changes and hence increases the risk of haemorrhage.[3] Most often associated with difficult labour, birth trauma, hypoxia, sepsis .[1] Clinical manifestations may vary from asymptomatic to benign as anaemia, flank mass, discoloration of scrotum, neonatal jaundice to life threatening Addisonian crisis depending upon the extent of haemorrhage.[2] Ultrasonography is the investigation of choice for diagnosis as well for follow up in neonatal period.[5] Serial USG monitoring is method of choice during conservative management.

Furthermore, the correct knowledge of the ultrasound patterns allows the safety in the differential diagnosis with other adrenal diseases.

Treatment depends on the severity and associated illness. Most of the cases are usually asymptomatic so managed conservatively. Infants with acute haemorrhage might need urgent blood transfusion. Laparotomy is indicated when haemorrhage seems to be continuing, especially when the exact site of haemorrhage is in doubt.[7] Adrenal haemorrhages usually take 3 weeks to 6 months to resolve completely.[5,6] Neuroblastoma should be suspected if the mass is not resolved after this period.[8]

CONCLUSION

Adrenal haemorrhage is uncommon in neonates. Presentation of neonatal adrenal haemorrhage varies from asymptomatic to life threatening adrenal insufficiency. The possibility of neonatal adrenal haemorrhage should be considered cases of hyperbilirubinemia with unknown etiology particularly when associated with risk factors like birth asphyxia, sepsis, trauma. Abdominal sonography is the modality of choice for initial diagnosis and follow-up of neonatal adrenal haemorrhage. Conservative management remains the mainstay of treatment along with close monitoring and regular follow up clinically and sonographically could suffice in asymptomatic cases of neonatal adrenal haemorrhage.

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