



CASE REPORT

Adrenal Hemorrhage Presenting As An Abdomen Mass In The New Born

Sheikh M Ashraf, Koushal Khajuria, Sanjeev Kumar Dingra*

Abstract

Neonatal adrenal hemorrhage is an uncommon but well recognized entity associated with perinatal asphyxia. It usually presents as asymptomatic abdominal mass. Most of the affected babies are of normal birth weight, full term and with history of birth trauma or neonatal asphyxia. Frequently these patients present with flank mass and jaundices and may rarely present as scrotal hematoma. We report a case of neonatal adrenal hemorrhage in asphyxiated neonate who was presented to us right at the time of birth

Key Words

Abdominal mass, Adrenal hemorrhage, Birth Asphyxia

Introduction

Neonatal adrenal hemorrhage is frequently associated with large fetal size, birth trauma, fetal and perinatal asphyxia, septicemia or coagulation defects (1). An incidence rate of 3 per 1,00,000 live birth has been suggested. The hemorrhage may be sufficiently extensive to result in death from exsanguinations or hypoadrenalism. An abdominal mass, anemia unexplained Jaundice or scrotal hematoma may be presenting sign (2). The infant adrenals are proportionally larger in size measuring 1/3rd of kidney size while in adults adrenal is 1/13th of kidney size. The neonate has paucity of peripheral fat, allowing for easier resolution of suprarenal glands (3).

In neonates adrenal gland are large, well vascularized organ. Neonates also are prone to hypotension and/or asphyxia. Any condition leading to hypoxia may lead shunting of blood flow to vital organ. Furthermore, hypoxia causes damage to endothelial cells, making them more prone to hemorrhage. The complexity of adrenal vasculature makes it disproportionately susceptible to massive adrenal hemorrhage (4).

Case Report

A 30 minutes old baby was brought to our institution with history of delayed cry, bluish discoloration around

mouth and abnormal breathing. While revealing history, this baby was first in birth order, a product of non-consanguineous marriage with apgar score of 5/10 at 5 minutes. Antenatal history revealed that mother was hypertensive in last trimester. There was no other significant history during pregnancy. Clinical examination at time of admission showed full term baby, birth weight of 2.5kgs, 39 weeks of gestational age, B.P 60/38 mmHg, Respiration rate= 50 respirations/minute, heart rate 126/min, pink under oxygen, peripheral pulses weak and neonatal reflexes were sluggish. There was no icterus, pallor, lymph nodes and edema. Respiratory distress and sub costal retractions were present. Palpation of abdomen revealed right sided abdomen smooth swelling. This was non tender, not moving with respiration. Examination of rest of systems were non remarkable.

Lab tests showed, Hb= 14g, TLC=11000, DLC P=68 L=32, Platelets= 2 lac/ul, ESR= 10mm/hr S.Bilirubin levels were within physiological range, urine examination, KFT, blood sugar and ABG were normal. USG (Ultra sonography) abdomen on day 1st, 3rd and 5th day was suggestive of adrenal hemorrhage. X-ray skull, chest, abdomen and limbs were normal. Contrast enhanced CT

From the PG Department of Pediatrics, GB Pant Hospital, GMC, Srinagar &* Aayuai Shree Child Care Center Jammu, (J&K)

Correspondence to : Dr. Sheikh M Ashraf PG Department of Pediatrics, GB Pant Hospital, GMC, Srinagar (J&K)-India



and Non CECT proved right adrenal hemorrhage (Fig 1 & 2). Patient was given routine treatment for birth asphyxia and injection hydrocortisone 5mg/kg prophylactically for 3days. Patient showed slow and progressive recovery and gradual decline in size of abdominal swelling. Repeat USG abdomen after 2 months showed normal adrenal without any calcification.

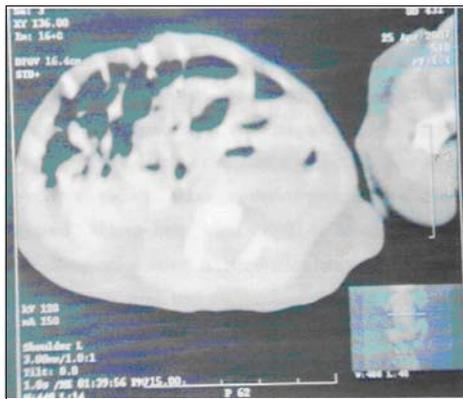


Fig.1: Contrast Enhanced CT Showing Right Adrenal Hemorrhage



Fig.2: CT showing Right Adrenal Hemorrhage

Discussion

Retroperitoneal adrenal hemorrhage usually occurs at birth or 1st postnatal days as a result of traumatic or breech delivery, large fetal size, perinatal asphyxia or fetal hypoxia. It can also occur in disorders of haemostasis, producing anemia from blood loss accompanied by an enlarging mass (5). Other times adrenal hemorrhage manifests as unexplained hyperbilirubinemia with a mass flank. in a healthy infant. In 80-85% of case right adrenal gland is involved (6).

Our patient has right adrenal mass and was of normal weight, born by caesarian section. But there was no anemia and no jaundice, with normal BP. Minor adrenal hemorrhage may not cause symptoms. Massive adrenal hemorrhage is rare. Symptoms include anemia and

jaundice associated with supra renal mass, in cases with severe blood loss. In 5-10% of cases hemorrhage is bilateral. USG has replaced urography in diagnosing this condition, demonstrating the site and size of lesion and allowing a accurate follow up. Within a month after hemorrhage the blood and necrotic adrenal tissue are resolved and the calcification appears at periphery of gland (7). In our patient there was no calcification after 3 months of USG follow up.

Unilateral adrenal hemorrhage is rarely of clinical significance. Deaths due to adrenal hemorrhage are frequently attributed to massive blood loss and adrenal insufficiency in adult. Adrenal insufficiency has not been reported until at least 90% of the adrenal tissue is destroyed. The prompt identification of adrenal hemorrhage is important because it can be an index. symptom for unsuspected coagulopathy and an early indicator of severe stress in patients with sepsis, burns, hypoxia or shock state (3). The finding of unilateral adrenal hemorrhage in blunt trauma or instrumentation necessitates follow-up to resolution to exclude spontaneous hemorrhage in an occult neoplasm.

CT scan is considered the criterion standard for imaging the adrenal glands in patient older then 6 months. It is quite sensitive for identifying a mass on adrenal gland. Without contrast medium adrenal hemorrhage cause a hyperdense mass like distortion of the normal adrenal gland, shape on CT scan. USG abdomen is criterion standard for screening of adrenal hemorrhage in neonates and serial follow-up being the only reliable sign for preventing unnecessary surgery.

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