MECONIUM PERITONITIS PRESENTING AS A PSEUDOCYST (A Case Report)

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Introduction

Meconium peritonitis, first described in 1761 [1], results from perforation of the gut prior to birth. Extravasation of sterile meconium into the fetal peritoneal cavity causes an intense chemical and foreign body reaction with characteristic calcification. This is not an uncommon disease entity in neonatal life, however, formation of giant pseudocyst is rare [2]. Very few cases have been reported in Indian literature [3-5]. A case of meconium peritonitis with pseudocyst formation due to large gut atresia confirmed by postmortem is presented.

Case Report

Preterm male baby was born to a 32-year-old multi-gravida with polyhydramnios at 33 weeks of gestation by a normal delivery. Antenatal ultrasonography at 24 weeks had revealed foetal ascitis. Baby was severely asphyxiated, weighed 2.3 kg and had gross abdominal distension but without evidence of a definite mass or free fluid. Peritoneal tap was dry. Rectal patency could not be established beyond 2.5 cm. Baby could not sustain spontaneous respiration and died following a cardiac arrest within one hour of birth. Investigations revealed Hb 15.8 g/dL, TLC 10,500/cumm with normal differential counts. Blood group 'O' positive. Blood urea 28 mg/dL, serum creatinine 1 mg/dL. Liver function tests were within normal limits. Radiograph of abdomen revealed a globular intraabdominal mass with stippled calcification in it and a rim around it (Fig 1).

During postmortem examination, the abdominal mass was found to have a calcified wall adherent to the small bowel. It was full of meconium. The colon along its entire length as well as the terminal ileum was cord-like and atretic with a narrow lumen and the gut proximal to this

portion was grossly dilated and filled with meconium (Fig 2). There were multiple adhesions between loops of small and large gut. Histologically there was sloughing of the mucosa with a prominent lipogranulomatous reaction. There was no evidence of ischaemia in the gut wall. Mesentery and intestinal vasculature was normal.

Discussion

Meconium peritonitis may occur as early as the end of the second trimester. Sometimes, when the perforation has occurred earlier in gestation, a dense fibrous membrane develops round the area of greatest

Fig 1 : Radiograph of the abdomen showing calcified pseudocyst.

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Fig. 2 : Post-mortem specimen showing atretic large gut with proximal dilation of small intestine.

concentration of meconium forming a pseudocyst [1]. This must have been the case in our patient where foetal ascitis was detected at 24 weeks. Giant cystic meconium peritonitis has been described infrequently [5,6]. Radiologically, a large air fluid level with peripheral calcification in a case with abdominal distension is very suggestive of meconium pseudocyst [2,6].

The underlying pathology leading to me-

conium peritonitis varies. Intestinal obstruction due to atresia or volvulus, cystic fibrosis, ischemic necrosis of intestine and fetal appendicitis have been reported [7,8]. Autopsy revealed large gut atresia to be the underlying cause in our case. Treatment is surgical with a reported mortality of 18 - 19% [7,8]. However, our case had severe asphyxia neonatorum and the baby expired immediately after birth and definitive treatment could not be offered.

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