

Meconium peritonitis: an interesting entity

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DESCRIPTION

A pair of late preterm twin female babies with a birth weight of 2.8 kg and 2.6 kg were born to G2P0A1L0 mother with a normal Apgar score. Antenatally fetus A was diagnosed to have echogenic small bowel (grade 3) with few specks of peritoneal calcification. Antenatal scans of fetus B were normal. After birth, X-ray and ultrasound of both the babies were done. The X-ray of baby A showed peritoneal calcification in the right hypochondrium region with absence of air under the diaphragm (figures 1 and 2), whereas the X-ray of the second twin was normal. Ultrasonography (USG) carried out on both babies was normal. There was no obvious malformation in both the babies at birth. Both the twins passed meconium within 24 h of birth. Both the babies were evaluated with newborn screening carried out for cystic fibrosis, which was normal in both babies. Now both babies are in our follow-up.

DISCUSSION

Meconium peritonitis is a result of sterile chemical peritonitis which results due to intrauterine bowel perforation and exudation of meconium into the peritoneal cavity. Meconium undergoes dystrophic calcification intrauterine, which results in the classic eggshell calcifications seen on X-ray.¹ The estimated prevalence is around 1 in 35 000.²



Figure 1 Peritoneal calcification in the right hypochondrium region with absence of air under the diaphragm.



Figure 2 Peritoneal calcification in the right hypochondrium region with absence of air under the diaphragm (calcification is shown by arrow head).

Meconium peritonitis is classified into three groups as per the antenatal USG findings:

- ▶ Type I: large meconium ascites
- ▶ Type II: large pseudocyst
- ▶ Type III: Intra-abdominal calcifications, small meconium ascites and/or a shrinking pseudocyst.^{3 4}

Our patient had type III meconium peritonitis.

The other differential diagnosis of meconium peritonitis which also present with intra-abdominal calcification are

- ▶ Meconium pseudocyst
- ▶ Intraluminal meconium calcification
- ▶ Liver calcification in the neonate following congenital infections
- ▶ Adrenal calcification

Learning points

- ▶ Meconium peritonitis can present in various ways in a newborn and the index of suspicion must be high.
- ▶ All these babies must be screened for cystic fibrosis as it is common in these babies.
- ▶ Meconium peritonitis must be kept as the differential diagnosis of intra-abdominal calcification in neonates.



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- ▶ Mesenteric nodes
- ▶ Hepatic granulomas

Neonatal outcomes have improved over time as a result of better diagnosis antenatally and with modern advances in paediatric surgery and perinatology.⁵ Surgery remains the definitive treatment with procedures including multiple drainage procedures, stoma creation and final ostomy closure.⁶

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