

IMAGES IN CLINICAL PRACTICE

PERITONEAL CALCIFICATIONS IN A NEWBORN

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A full term baby girl, born to a 27-year-old woman (gravida 1) at 38 weeks of gestation, presented at 48 hours age with generalized abdominal distention, bilious vomiting and failure to pass meconium. The mother had no medical history before and during pregnancy, prenatal ultrasound screenings were normal. A nasogastric tube was passed in the baby without problems. A simple thoracoabdominal radiography showed dilated loops of small intestine, air-fluid levels and multiple calcifications in the right lumbar region (black arrowhead on Figure 1). On abdominal ultrasonography, these scattered calcifications were also seen along with ascites, a very dilated bowel loop that was mistakenly identified as colon. Urgent exploratory laparotomy was done that revealed an ileal atresia 3 cm proximal to the ileocecal valve, with peritoneal adhesions. There were no other associated malformations. Due to the caliber disparity caused by the dilated ileum and to avoid any sacrifice at the expense of the precious terminal ileum; an ileostomy was performed after peritoneal cleansing.

What is the cause of peritoneal calcifications?

Meconium Peritonitis in-utero (MP) is a chemical peritonitis caused by in-utero bowel perforation.^{1,2} Its incidence is rare, but serious neonatal morbidity or mortality can occur if the diagnosis is made after birth.³ The extraluminal meconium calcifies and may be seen with fetal ultrasonography and plain abdominal X-ray. MP result mainly from neonatal intestinal obstructions including intestinal atresia, in-utero intestinal ischemia, fetal intestinal volvulus or other malformations like imperforate anus.^{1,4} Neonatal intestinal obstructions are the most common surgical emergencies in the neonatal period. Early and accurate diagnosis is paramount for proper patient management. Traditional diagnostic studies such as plain abdominal X-ray can show rare findings such as calcifications, which may lead directly to surgical exploration without any additional imaging. The presence of calcifications as well as ascites and/or free air is highly indicative of a perforation in utero with meconium peritonitis.^{2,3} Diffuse peritoneal calcification as an isolated finding with no clinical or other radiological

Figure 1. Peritoneal calcifications



correlation can be successfully treated non-operatively.⁴ In our patient, the symptoms resolved. She was discharged from the hospital 10 days after surgery and underwent the closure of the ileostomy 6 weeks later with good post-operative outcomes.

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