Case Report

Bowel wall calcification secondary to meconium peritonitis- A rare entity

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Abstract Meconium peritonitis is an aseptic chemical peritonitis that follows perforation of intestines in fetal life. Bowel wall calcification in such cases is rare. It should be emphasized that correct diagnosis can be made on basis of characteristic roentgenographic findings.
Key words: Meconium peritonitis, Echogenic bowel loops, Egg shell appearance.

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INTRODUCTION

Meconium peritonitis results from perforation of bowel in utero. Any cause of bowel obstruction can result in this cases. Include atresia of bowel, volvulus, intussusception, bands and meconium plug syndrome in cystic fibrosis. A sterile inflammatory reaction and ascites accompanies bowel perforation. Meconium undergoes dystrophic calcification resulting in classic egg shell appearance on x rays in cases of bowel wall calcification.[1] In this case report we describe sonography findings, postpartum radiographic studies and infant's operative finding with meconium peritonitis secondary to atretic bowel leading to bowel wall calcification.

CASE REPORT

Two days old premature infant had repeated bile stained vomitus and abdominal distension. On admission baby's general condition was fair.

On X ray: Characteristic calcification of bowel wall noted.

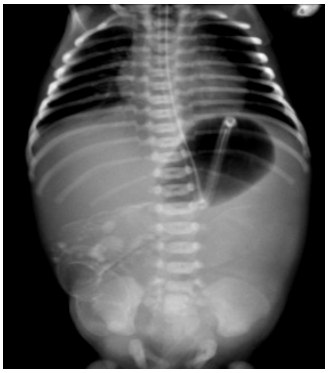

Figure 1a: Tubular calcification, egg shell type of calcification noted below stomach bubble oriented horizontally on right side

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On sonography:-Echogenic bowel loops were seen

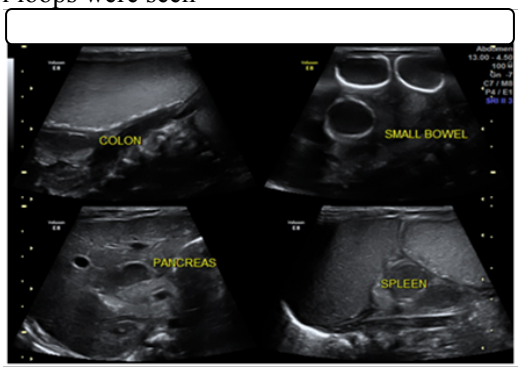

Figure 2a: Typical egg shell echogenicity of bowel wall calcification

From all above findings diagnosis of **meconium peritonitis with bowel wall calcification** was made.

Operative findings-At exploratory laparotomy whole intestine was dilated, segmental dilatation of jejunum and wall calcification was seen. Multiple atresias in terminal ileum were noted. Rectum was thin cord like. So jejunum was excised and end to end anastomosis was done.

Figure 1b

Figure 2b

Figure 3b

Figure 1b: Multiple atresias and thin cord like rectum
Figure 2b: Segmental dilatation of jejunum
Figure 3b: Post operative picture

DISCUSSION

Intraabdominal calcification due to meconium peritonitis in neonatal period is somewhat uncommon entity. Other causes for calcification like liver calcification which may be single or multiple. Typically on USG seen as echogenic foci within liver calcification due to infection, meconium pseudocyst, mesenteric nodes and adrenal calcification which may be unilateral or bilateral, occur due to haemorrhage, infections like tuberculosis, addisons disease. Very few references for calcification of bowel wall are seen in literature.

CONCLUSION

We report a case of Bowel wall calcification due to meconium peritonitis which is characteristic egg shell, tubular on x ray. Sonographycally it is seen as very dense echogenic ring if bowel is seen in transverse section and typical long tubular, if bowel is seen in longitudinal sections.

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