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Case Report

Caecal Duplication Cyst Presenting as Complicated Appendicitis

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Abstract

Background: Caecal duplication cyst is an exceptionally rare congenital anomaly of the gastrointestinal tract and accounts for a very small proportion of alimentary tract duplications.[1] Clinical presentation is variable and may include abdominal pain, palpable mass, intussusception, gastrointestinal bleeding, or intestinal obstruction.[1,2]

Case Presentation: A 7-year-old girl presented with right-sided lower abdominal pain and non-bilious vomiting. She had an abdominal lump in the right lumbar region.Initially, she was diagnosed as appendicular lump. On CECT abdomen, she was diagnosed with cystic duplication of the ascending colon. On exploratory laparotomy, it was identified asa caecal duplication. Ileocaecal resection with primary ileocolic anastomosis was performed. Histopathological examination confirmed a duplication cyst.

Conclusion: Although rare, caecal duplication cyst should be considered in the differential diagnosis of complicated appendicitis. Complete surgical excision remains the treatment of choice and is associated with excellent outcomes.[1,2]

Key words: Caecal, Duplication cyst, Complicated appendicitis.

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Introduction

Enteric duplication cysts are rare congenital malformations characterized by a well-developed smooth muscle coat and a mucosal lining resembling any part of the gastrointestinal tract.[1] The ileum is the most common site, while colonic duplications account for approximately 13% of all gastrointestinal duplications.[2] Caecal duplication cysts are among the rarest forms reported in the literature.[1,3] Most patients present before two years of age, although diagnosis may occur later in childhood or adulthood.[2]

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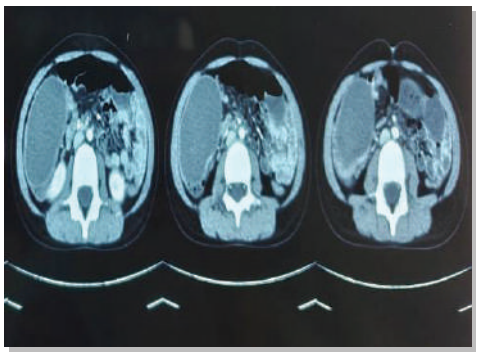
Case Presentation

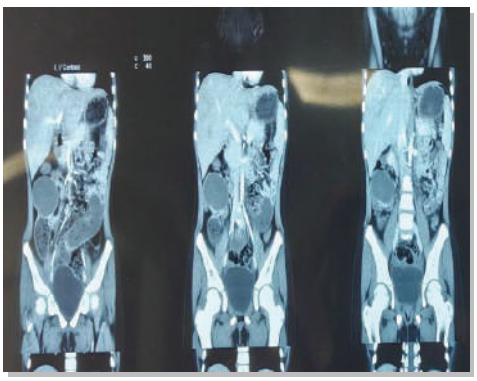
A 7-year-old girl wasadmitted with complaints ofright-sided lower abdominal pain for 6 days. Pain was associated with vomiting for 5days, which was initially non bilious but became bilious with time. She was lethargic and dehydrated but afebrile. There was a tender intra-abdominal lump measuring about 6x5 cm in the right lumbar region, which had a smooth surface. The margin, consistency, and mobility couldn't be evaluated due to tenderness. Digital rectal examination and other systemic examination were normal.

Her complete blood picture shows neutrophilic leukocytosis. Plain abdominal radiography demonstrated multiple air-fluid levels suggestive of distal intestinal obstruction. Ultrasonography revealed a cystic lesion

in the right lumbar region with solid debris in it. Similar imaging findings have been described in previously reported cases of caecal duplication cyst.[1,2]

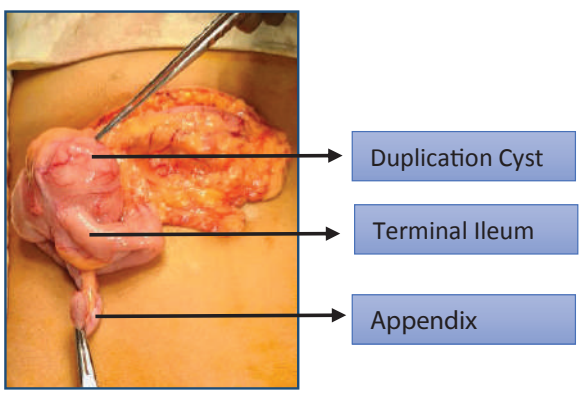
On contrast-enhanced CT scan, it was diagnosed as duplication cyst which was arising from ascending colon.

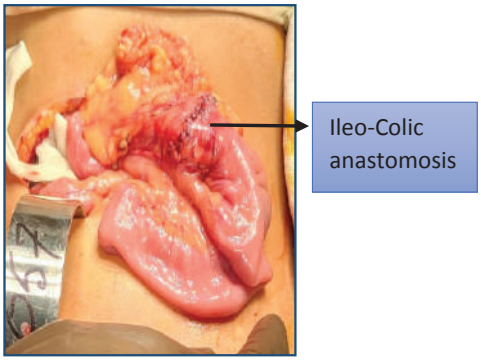


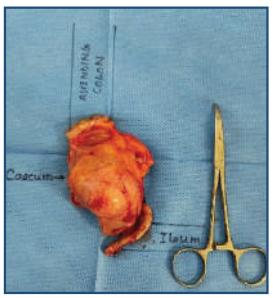


Surgical Management

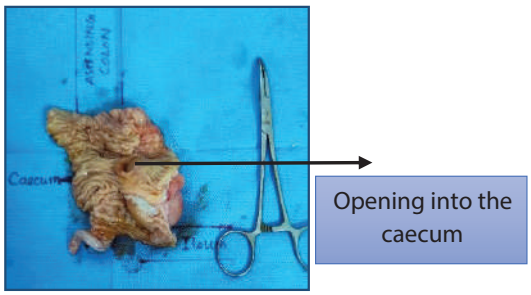
Exploratory laparotomy revealed a cystic mass arising from the mesenteric border of the caecum. The lesion compressed the adjacent bowel lumen, causing intestinal obstruction. Segmental ileocaecal resection followed by primary ileocolic anastomosis was performed, which remains the recommended treatment in most reported cases.[1,2,4] We cut the specimen along the ante-mesenteric border of the caecum and found an opening of the duplication cyst in the caecum.







Specimen



Cut open Specimen

Histopathological Findings

Histopathological examination demonstrated gut wall showing focal thinning along with duplication of mucosa in between muscularis propia. Histopathological diagnosis was Enteric Duplication Cyst. No ectopic gastric mucosa or malignant changes were identified.

Discussion

The embryogenesis of enteric duplication cysts remains uncertain. Proposed mechanisms include aberrant recanalization of the primitive gut, split notochord syndrome, and persistence of embryonic diverticula.[2]

Clinical presentation varies according to size, location, and associated complications. Patients may

present with abdominal pain, intestinal obstruction, intussusception, perforation, gastrointestinal bleeding, or an acute abdomen.[1–5]

Preoperative diagnosis is often difficult. Ultrasonography is considered the initial imaging modality of choice because it may demonstrate the characteristic double-wall sign.[2] Computed tomography and magnetic resonance imaging can further delineate anatomical relationships.[2]

Complete surgical excision is recommended because untreated lesions may lead to recurrent obstruction, infection, perforation, or, rarely, malignant transformation.[2,4] Surgical outcomes are generally excellent following complete resection.[1,2]

Conclusion

Caecal duplication cyst is a rare condition. Due to its nonspecific clinical and radiological features, diagnosis is often made intraoperatively. Complete surgical excision remains the definitive treatment and is associated with excellent prognosis.[1,2]

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