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JCIMCR OPEN ACCESS Journal of Clinical Images and Medical Case Reports

ISSN 2766-7820

Case Report

Open Access, Volume 5

Adult ileal duplication cyst acting as lead point of ileo-caecal intussusception a rare case of complete bowel obstruction in adults

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Received: Mar 06, 2024

Accepted: Apr 17, 2024

Published: Apr 24, 2024

Archived: www.jcimcr.org

DOI: www.doi.org/10.52768/2766-7820/3008

Abstract

Enteric duplication cyst presenting as intussusception in adult and causing complete small bowel obstruction is a rare phenomenon. A 19 year old female presented with complaints of abdominal pain, bilious vomiting, abdomen distension and constipation for 2 days. Patient had similar episodes in the past. Computed tomography of abdomen showed dilated small bowels with "Target Sign" suggestive of Ileo caecal intussusception. Patients was taken for surgery and intraoperatively it was noted to have thick walled cystic swelling in the terminall ileum. Segmental resection done along with cyst and primary anastamosis was done. Histopathological confirmation was done as Duplication cyst.

Keywords: Duplication Cyst; Intussusception; Target Sign; Segemental Resection.

Introduction

Duplication cysts of the gastrointestinal system are one of the rare congenital anomalies affecting the GI system [1]. Mid gut (Small intestine) is the most common site followed by colonic and gastric duplications with the most commonest part being distal small bowel. The presentation of enteric duplication cyst varies but more common is intestinal obstruction either due to compression or volvulus or rarely as intussusception [2] and palpable mass. These cysts can be diagnosed on Ultrasonography or Computed Tomography of the abdomen. We report a case of ileal duplication cyst presented with acute intestinal abdomen due to ileocaecal intussusception, needing surgery [2] and segmental resection in the Department of Surgery of our hospital.

Case presentation

A 19 year old female came to ER with the complaints of abdomen pain, diffuse abdomen pain more in the lower abdomen associated with vomiting and constipation for 2 days Patient had no fever. Patient had frequent similar complaints in the past requiring 1 or 2 days of hospital admission. Patient has not radiologically evaluated in past. On examination abdomen distended, diffuse tenderness present more in the right Iliac fossa region. RIF rebound tenderness is present. No guarding or rigidity. With the possible diagnosis of acute appendicitis from history, examination and age of the patient. We went on to investigate the patient, except for elevated WBC 20,200 cells/cu.mm rest of blood investigations were normal. Ultrasound abdomen showed small bowel obstruction. Hence proceeded with Computed Tomography of abdomen with IV contrast for detaiked evaluation. Showing, grossly dilated small bowel loops with Telescoping of ileum into caecum (Figure 1).

With the diagnosis of Acute small bowel obstruction due to ileo-cecal intussusception [2] (Figure 3). We proceeded with diagnostic laparoscopy showing hugely dilated small bowel loops. Hence proceeded with laprotomy. Intussusception was reduced. A firm immobile swelling of size 3 cms palpated in the lumen of the terminal ileum over the mesentric side. Segmental resection and primary anastamosis done.

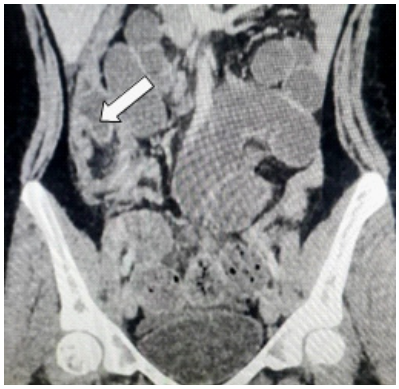

Figure 1: CECT image demonstrating telescoping of ileum into caecum with thick walled cystic swelling in apex.

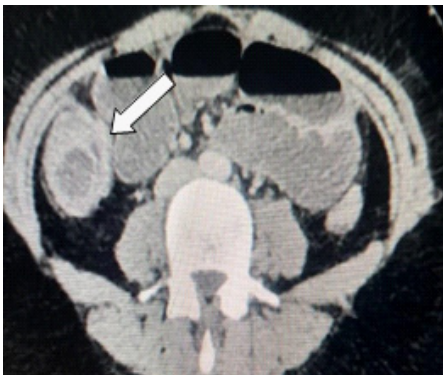

Figure 2: Axial section demonstrating dilated small bowel loops with "Target Sign". Thick walled cystic looking swelling in the tip of intussusception causing complete obstruction. Axial section demonstrated the classical "Target Sign" or "Doughnut Sign".

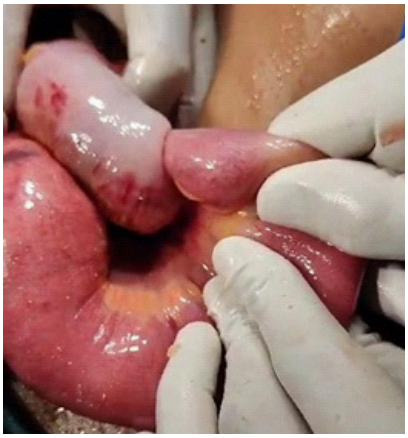

Figure 3: Intra operative image demonstrating ileo cecal intissusception.

Resected bowel opened shows firm thick walled cystic swelling in the lumen acting as lead point for intussusception (Figure 4) causing obstruction. Histopathology showed features of duplication cyst of the ileum. Post-operative days were uneventful and discharged on day 4.

Discussion

Duplication cysts occur because of congenital aberration during gut development [5]. Duplication cyst of the GI system or Duplication of Alimentary Tract (DAT) as explained by Ladd et al [3] is one of the rare congenital malformation of the Gastro intestinal system that can affect anywhere from mouth to anus. It shares the morphology with GI system where it arises. DAT arises either from the mesenteric side or contra lateral side. Duplication cyst can either be communicating (<10%) or non-communicating (90%) [3]. These are usually diagnosed early in life, presentation in the adult is very rare.

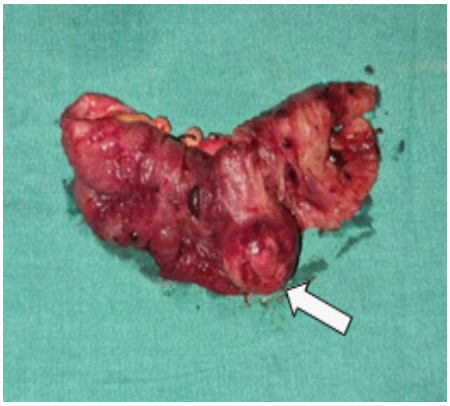

Figure 4: Cut section of the resected bowel showing Duplication cyst.

Majority of the case present in infancy and childhood. The most common presentation in adults would be small bowel obstruction mainly due to compressive effects, rarely due to intussusception. In children plapable mass, bleeding due to erosion of mucosa or ulcers, intussusception, anemia [4].

Though USG abdomen is a useful diagnostic tool in detecting intussusception via, "Doughnut sign" or "Pseudo kidney sign "[6], it is more useful in children than in adults. Contrast enhanced CT has become the diagnostic tool of choice in detecting duplication cysts and its complications In CT intussusception is seen as "Target Sign" [6]. In our case CECT shown Target sign in axial section with telescoping of ileum into cecum with cystic swelling acting as lead point. Differential diagnosis of duplication cystincludes lymphangioma, omental cyst, mesentric cyst, mesenteric lymphoma, Meckel's diverticulum and intramural neoplasm [2,4].

Treatment includes segmental resection of involved segment of bowel segment along with the cyst with primary anastamosis. Though multiple Duplication cysts are rare whole bowel examinantion should be done to exclude other pathology of bowel causing obstruction.

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