CASE REPORT OPEN ACCESS

Epiploic Appendagitis Mimicking Acute Appendicitis in a Child

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ABSTRACT

Epiploic Appendagitis (EA) was found as rare cause of acute abdomen in 6-year-old female presenting with clinical features of acute appendicitis. Laparoscopic excision of infarcted caecal appendix epiploic secondary to torsion resulted in satisfactory recovery. We herein review the current literature highlighting the radiological and diagnostic findings along with management of this rare entity.

Key words: Epiploic appendagitis; Children; Acute abdominal; Laparoscopy

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INTRODUCTION

Epiploic Appendagitis (EA) is a rare pathology resulting from either inflammation, torsion or ischemia of an Appendix Epiploicae, which are fatty appendages present on large bowel [1,2].

Although disorders of Appendix Epiploicae are most common in the fourth to fifth decade with a male predominance, still handful of cases have been reported in pediatric age group [1]. Since the clinical presentation is not pathognomonic, so diagnosis is rarely confirmed preoperatively and is often confirmed intraoperatively (1-3).

Moreover owing to rarity, its omission from differential diagnosis is common thus resulting in unnecessary surgical intervention in patients who often respond to conservative treatment where surgery is advocated in non-responders.

We herein report a case with review of recent literature with the aim to highlight the importance of considering it as differential diagnosis among causes of pediatric acute abdomen and highlight its diagnostic clinical and radiological features so that unnecessary surgical intervention can be avoided by prompt diagnosis.

CASE REPORT

A 6-year-old female child presented with 4 days history of the right lower abdominal pain, which was associated with nausea, few episodes of vomiting and a low-grade fever. Clinical examination showed non-distended abdomen with tenderness in periumbilical and right lower abdominal region with minimal guarding in absence of rebound tenderness or Rovsing's sign. Laboratory investigations suggested mild leukocytosis with a WBC count of 12.2/mm 3 with 80% neutrophils on differential count and C-reactive protein was 42 mg/l. Urine and blood biochemical examinations were normal. Ultrasound examination showed normal adnexa with presence of inflammatory mass in right iliac fossa without any significant free fluid.

Intravenous Contrast enhanced CT scan abdomen revealed well-defined rounded lesion at right iliac fossa, thickening of terminal ileum and caecum along with

surrounding inflammatory changes and minimal free fluid.

Since there was increase in abdominal pain with recurrent vomiting and abdominal tenderness, so diagnostic laparoscopy was planned with provisional diagnosis of appendicular mass or Meckel's diverticulum. Diagnostic laparoscopy revealed hemorrhagic fluid in the pelvis with gangrenous Appendix epiploica on the surface of the caecum with mildly congested appendix (Figure 1).

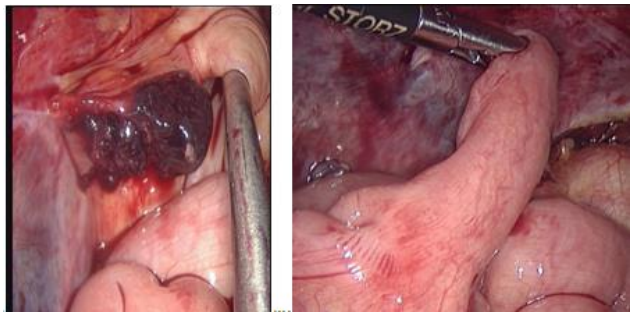

Figure 1: Torsion of Appendix Epiploicae, Normal Vermiform Appendix

The infarcted appendage was excised with bipolar cautery and appendectomy was performed. Histopathology revealed a normal appendix with congested, hemorrhagic and partly necrotic adipose tissue suggestive of EA. Postoperative period remained uneventful and child was doing well on subsequent follow up of 6 months.

DISCUSSION

Epiploic Appendagitis (EA) is an extremely rare inflammatory pathology of fatty appendages of colon [1-4]. These appendages are fatty structures with approximately 0.5 to 3 cm in diameter scattered over entire colon with covering of peritoneum and are supplied by single artery and vein. The infarction of these appendages from either torsion or thrombosis results in inflammatory pathology termed as Epiploic Appendagitis (EA) or Appendicitis Epiploicae. Involvement of Caecal appendages remains clinically significant as it is most common site reported in pediatric age group and often mimics acute appendicitis [4-5].

The clinical presentation is usually atypical characterized by signs of peritoneal irritation usually localized to right side of abdomen with few reported cases mimicking appendicitis, cholecystitis or even diverticulitis [4,6,7]. As experienced in present and reported cases clinical presentation is heralded by presence of either sudden onset of right lower abdominal pain with symptoms like nausea, vomiting and low-grade fever or may result in chronic pain, persisting for months [1,3,4,5,7]. The differential diagnosis often includes omental infarction, mesenteric panniculitis, fat-containing tumors, and inflammatory conditions of the colon, in particular diverticulitis and appendicitis for which advance radiological evaluation is often warranted [1-2].

A review of available literature and present experience suggest that laboratory investigations are usually inconclusive [3,4]. Most of the patients either have a normal or slightly elevated leukocyte count. The presence of hyperechoic, non-compressible ovoid structure near the colonic wall with the absence of blood flow on vigilant sonographic assessment often provides the clue to diagnosis [1-2].

With advancement and increasing availability of CT scan, preoperative diagnosis has often been reported in increasing number of cases. CECT findings are typically characterized by presence of an oval lesion adjacent to anterior wall of colon with a diameter less than 5 cm (mean diameter 1.5 - 3.5 cm), density values equal to those of the fat, and identification of specific central high-attenuation dot sign [1-3].

Although absence of central dot signs (resulting from thrombosed vessels) does not exclude EA but still it is most specific radiological sign [1]. Magnetic resonance findings include an oval shaped fat intensity mass with a central dot on T1- and T2- weighted images [2].

Treatment of EA is mainly conservative with analgesic and antibiotics if diagnosis is confirmed [1, 4-7]. Although conservative treatment has been successful in few reported cases but still treatment appears to be individualized based on accurate preoperative diagnosis and the severity of clinical symptoms [1-4].

As experienced in present case, diagnostic laparoscopy remains minimal invasive diagnostic and therapeutic procedure. The laparoscopic excision of the infarcted appendage with seromuscular inversion of caecal wall remains the treatment of choice in cases with missed pre-operative diagnosis, severe abdominal pain, and in cases with recurrent episodes of EA [3,6].

In conclusion, EA should be considered as differential in children presenting with atypical features of acute abdomen. An accurate diagnosis may be possible with high index of clinical suspicion and vigilant radiological assessment thus facilitating conservative treatment and avoiding unnecessary surgical intervention. We con-

clude that laparoscopy is safe and feasible both as diagnostic and therapeutic procedure and should be considered as surgical intervention of choice especially in cases with diagnostic dilemma or failure to respond to conservative treatment..

Consent: Authors declared that they have taken informed written consent, for publication of this report along with clinical photographs/material, from the legal guardian of the patient with an understanding that every effort will be made to conceal the identity of the patient however it cannot be guaranteed.

Authors' Contribution: All authors contributed equally in concept, literature review, and drafting of the manuscript and approved the final version of this manuscript.

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