Acute cecal diverticulitis: a case report and review of literature

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Abstract We describe a case of cecal diverticulitis presented to us mimicking acute cholecystitis. The differential diagnosis and lines of management are discussed.

Keywords: Solitary, cecal diverticulum, cecal carcinoma, appendicitis, cholecystitis.

Case presentation A 30-year old soldier presented to us with a 3 day history of abdominal pain. The pain started in the epigastric region then shifted to the right upper quadrant. The patient had no associated symptoms.

Physical examination revealed an ill-looking patient who was not pale nor jaundiced but pyrexial with a temperature of 37.9°C and a pulse of 98/m and BP of 140/90 mmHg. There was a guarding in the upper abdomen and marked tenderness in the right hypochondrium with positive Murphy's sign. Rectal examination was unremarkable. Routine hematological investigation revealed leucocytosis of 18,000 with 83% neutrophilia. Liver function tests, blood sugar, electrolytes, amylase and urine analysis were all normal.

Management A provisional diagnosis of acute acalculous cholecystitis was made and hence intravenous (IV) antibiotics were started. Because of the unsatisfactory response to the conservative treatment, the patient underwent exploratory laparotomy 48 hours later.

Chest and abdominal x-ray films were unremarkable except for two dilated loops of jejunum.

Sonographic examination of the upper abdomen was not conclusive and the gall bladder was free of stones.

Laparotomy revealed a very thick-walled inflamed cecum which was lying near the gallbladder and there was a small perforation in the medial wall of the cecum. The appendix was normal.

As cecal carcinoma could not be confidently excluded, right hemicolectomy was performed and the abdominal cavity was washed with warm saline.

Histopathological examination of the resected specimen showed acute diverticulitis with perforation of the cecum and there was no evidence of malignant changes.

Postoperative recovery was uneventful and barium enema examination performed six weeks later excluded further colonic diverticulae.

Discussion Acute inflammation of solitary cecal diverticulum is a relatively rare entity. About 400 cases have been reported in the literature. It is a congenital true diverticulum which contains a muscle coat. Incidental diagnosis of asymptomatic cecal diverticulum was found in 0.5% of barium enemas. Acute inflammation occurs in 10-25% of cases. Other complications like bleeding and perforation occur even more infrequently. Symptoms and clinical findings are so similar to those of acute appendicitis that it may be impossible to differentiate between the two.
Fig. 1: Acute inflammation of mucosa and submucosa.

Fig. 2: Edge of ulcer. Note absence of main muscle layer.
clinical entities. Cutazar explains four features that may suggest the diagnosis: (1) relative long history; (2) relative lack of toxicity; (3) infrequent vomiting and (4) local tenderness is not marked and slightly higher than that of appendicitis.5,11 Other conditions in the differential diagnosis are Chron's disease, actinomycosis, perforating foreign body, amebiasis, carcinoma and tuberculosis.1

Preoperative barium enema, colonoscopy can be of help in patients without signs of acute abdomen.6,7,8 In our case, the signs were in the right hypochondrium mimicking that of acute cholecystitis. Ultrasound scanning and Hida scan are of value in the diagnosis of such conditions.

We believe that management of acute cecal diverticulitis is mostly surgical. Carcinoma of the cecum remains the most important and difficult lesion to differentiate from cecal diverticulum.11 Fischer and Farkas recommend supportive, non-operative treatment in preoperatively diagnosed cases.6 In our view, this is rare. However, indications for intervention should be the same as those applied to sigmoid diverticulitis, i.e. recurrent episodes, constricting mass, abscess formation or fistula.9

Lamphier pointed out conservative treatment even when diverticulitis is diagnosed intraoperatively.9 This can be helped by the diagnostic aids expressed by Bell,13 (a) Mobilization of the cecum; (2) invagination of the cecum opposite to the diverticulum may allow palpation of the ostium or faecolith; (3) frozen section biopsy and (4) cecotomy.1,14 Like the others, we do not recommend cecotomy because it causes a high degree of contamination.6,10

For cases diagnosed intraoperatively, the aim should be towards exclusion of carcinoma of the cecum. If this can be confidently ruled out, simple diverticulectomy is recommended if feasible, or limited resection of the ileocecal region.1 Lamphier has placed a mortality of 10% following extensive resection in a highly contaminated surgical field.9,11 For this reason, we recommend right hemicolectomy only in cases where carcinoma of the cecum cannot be ruled out.

**Conclusions** The preoperative diagnosis of solitary cecal diverticulitis is difficult. However, a conservative non-operative approach is appropriate in asymptomatic preoperative diagnosed cases. Intraoperative management is based upon the exclusion of carcinoma of the cecum. Major colonic resection is to be reserved for those cases in which carcinoma of the cecum cannot be ruled out.

**References**

ملخص

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