

MULTIPLE DIVERTICULOSIS OF JEJUNUM WITH FECOLITH PRESENTING AS ACUTE ABDOMEN

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ABSTRACT

Jejunal diverticulae are very rare, constituting only 0.1-1.5%, most often being asymptomatic. Owing to their rarity, the diagnosis and management are usually delayed. Rarely, they present as acute abdomen with 10-30% of patients having complications. Some complications are potentially life-threatening and hence need an early surgical intervention. A particular complication is intestinal obstruction due to the impaction of fecolith. Surgical exploration usually becomes necessary because the symptoms of obstruction are not responsive to medical therapy. We report a case of multiple acquired diverticula of jejunum associated with fecolith, presenting as acute abdomen in an 88 year old man, to create awareness of the entity as one of the causes of acute abdomen in the elderly. An emergency laparotomy was performed with a diagnosis of subacute intestinal obstruction and the jejunum appeared to be grossly dilated with multiple diverticula and an impacted fecolith. On gross examination, multiple diverticulae were noted on the mesenteric border. Multiple bits were taken from the diverticulae for histopathological examination, which demonstrated the prolapse of mucosa and submucosa into the muscular layer.

Keywords : Jejunal diverticulosis, fecolith, diverticulitis, intestinal obstruction

INTRODUCTION

Diverticula can be congenital or acquired and can occur anywhere from stomach to rectosigmoid. They can be differentiated based on the layers of intestine.^[1] Congenital diverticulae have all the three layers of intestine, whereas acquired diverticulae lack muscular layer.^[2]

Jejunal diverticulae are very rare and constitute only 0.1-1.5%. They tend to be large and multiple. They are considered as pseudodiverticulae of pulsion type, caused by

increased intraluminal pressure and weakening of the wall.^[3] Microscopically, they contain only mucosa and submucosa.

Though presenting symptoms are chronic abdominal pain, malabsorption and diverticulitis, rarely they may present as acute abdomen. 10-30% of patients with jejunal diverticula may have complications. Surgery is the treatment of choice for almost all complicated cases.^[4]

We report a case of multiple acquired diverticula of jejunum associated with fecolith, presenting as acute abdomen, to create awareness of the entity as one of the causes of acute abdomen in the elderly.

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CASE REPORT

An 88 year old man, known diabetic and hypertensive on treatment, was brought to the hospital with a history of sudden development of acute onset abdominal pain with abdominal distension and constipation of two days duration. Examination revealed distension of abdomen and absent bowel sounds. There was tachycardia. Otherwise general physical and systemic examination were unremarkable.

Erect x-ray abdomen showed multiple air fluid levels. Plain Computerised Tomography (CT) scan of abdomen revealed a calcific intraluminal mass in the jejunum causing obstruction proximal to it. Laboratory investigations indicated an acute kidney injury, complete blood count was within normal limits. Routine serological tests were non-reactive. With a clinical diagnosis of subacute intestinal obstruction, an emergency laparotomy was performed. Jejunum appeared to be grossly dilated with multiple diverticula. An impacted fecolith was noted 20 cm distal to duodenojejunal flexure and removed. The involved part of the jejunum was resected and sent for histopathological examination.

Grossly, the resected jejunal segment measured 48 cm in length with multiple diverticulae of different sizes on the mesenteric border on either sides, nine in number, separated from each other by a few centimetres. Size of the diverticulae varied, largest was 4x3 cm and smallest was 3x2 cm. On cut section, the diverticulae had comparatively thinner walls and were communicating with the lumen of jejunum, showing congestion of mucosa.

Multiple bits were taken from all the diverticulae for histopathological examination. Microscopically, diverticulae showed mucosa and submucosa prolapsing through the muscle layer. There was associated mild diverticulitis. Few tiny lymph nodes isolated showed reactive hyperplasia.

Patient recovered postoperatively and died 3 months later due to diabetic complications.

DISCUSSION

Jejunal diverticula are considered as false diverticula and occur mainly in elderly males.^[5] These diverticula arise on the mesenteric border where the mesenteric vessels penetrate, the etiology being intestinal dyskinesia and high intraluminal pressure.^[1] Jejunal diverticula of the antimesenteric border are very rare.^[6]

In the present case, patient was 88 year old, diverticulae were multiple and the cause was a fecolith, which resulted in obstruction and raised intraluminal pressure, leading to altered peristalsis.

Clinical presentation of jejunal diverticulae is highly variable, as chronic symptoms masquerade as various other intestinal diseases. They are usually asymptomatic because jejunum is relatively free and motile as compared to duodenum. Many patients may present with pain and flatulence, as a result of retention of intestinal contents in the diverticula.^[7]

Patients can also present with associated complications like hemorrhage, perforation and intestinal obstruction due to enterolith formation.^[8] Most often, jejunal diverticulosis is an incidental finding on CT imaging or during surgery.^[3]

Enteroliths are usually small and easily pass into the colon, due to which patients are asymptomatic most of the times.^[8] They are found in 2 to 4.5% of these patients and are often difficult to diagnose, owing to their rarity. However, large stones might lead to an obstruction in the distal intestine, resulting in 'enterolith ileus'.^[9]

Enteroliths can be of two types: false enteroliths consisting of fecolith, bezoars or foreign bodies and true enteroliths composed of choleic acid and calcium.^[9] The acidic environment of diverticulae favours the metabolism of bile salts to choleic acid, thus high levels of choleic acid may aid in the diagnosis of a fecolith.^[8]

Radiological investigations are helpful when there are complications like perforation or intestinal obstruction. Contrast enhanced CT helps in identifying asymmetrical thickening,

focal outpouching filled with fecal matter and localised free intraperitoneal air.^{[2] [10]}

Though rare, jejunal diverticula has to be kept in mind as one of the differential diagnoses or causes of acute abdomen. Segmental resection of small bowel is the treatment of choice.

Since few patients are asymptomatic, preoperative identification can be quite difficult. Clinical awareness of this disease is important, as the symptoms may mimic malabsorption or irritable bowel syndrome. Awareness of potential complications such as bleeding, perforation, obstruction, volvulus might aid in an early diagnosis and intervention, thereby resulting in reduced mortality and morbidity.

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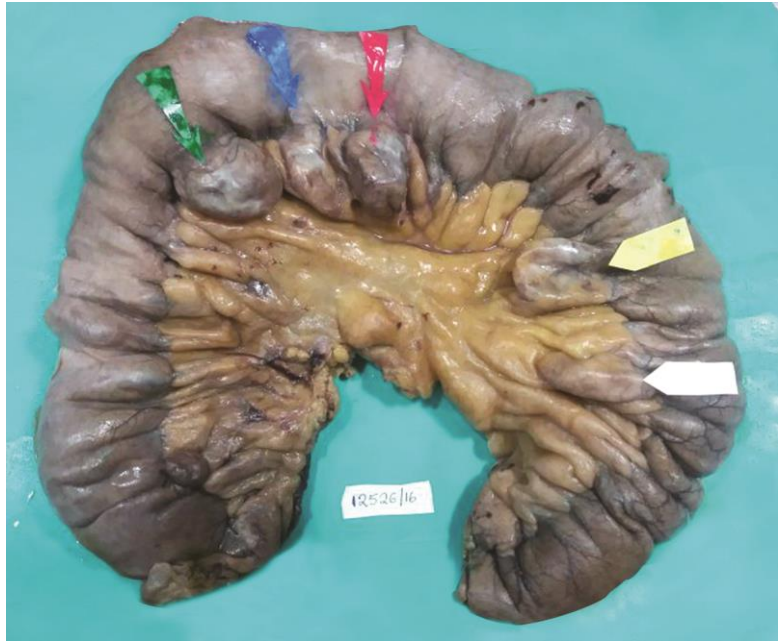


Fig.1 : Resected jejunal segment showing multiple diverticulae on the mesenteric border

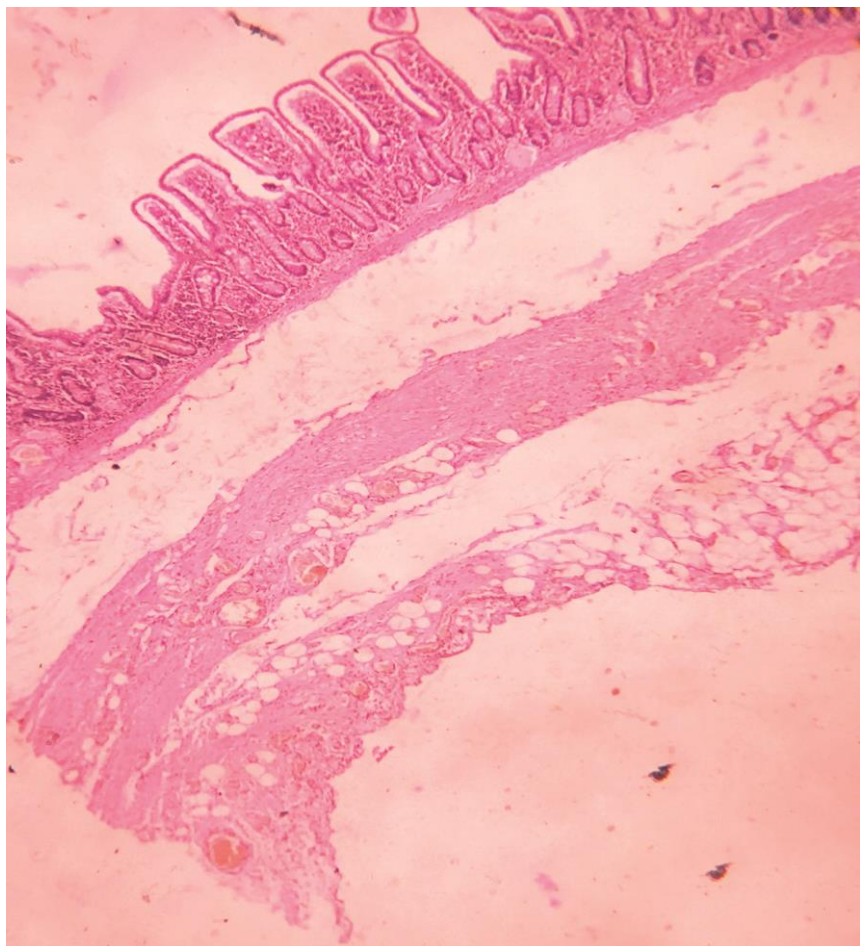


Fig.2: Section from diverticula showing the absence of muscular layer