

Case Report

Large jejunal diverticular faecolith causing small bowel obstruction: a bizarre cause of an acute abdomen

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Received: 16 August 2019

Accepted: 13 September 2019

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ABSTRACT

Jejunal diverticula are uncommon and usually asymptomatic. Very rarely, they can lead to acute complications such as bleeding, diverticulitis, perforation and obstruction. Incidence of faecolith in jejunal diverticula is also rarely reported. In this report we outline our experience of acute small bowel obstruction due to the dislodgement of the faecolith from diverticula into the jejunum, where patient was previously asymptomatic and successful management of the case.

Keywords: Small bowel obstruction, Diverticulosis, Jejunal diverticula, Faecolith

INTRODUCTION

Jejunal diverticula have a reported incidence between 0.3% and 2.3% based on a combination of postmortem studies and radiological investigations.¹ Whilst most cases remain asymptomatic, patients may develop complications including diverticulitis, perforation, bleeding or intestinal obstruction which appear in 10-30% of the patients increasing morbidity and mortality rates. Here, we describe the progress of a 88-year-old male who presented with vomiting, abdominal pain, distension of abdomen and constipation suggestive of small bowel obstruction who subsequently went on to have a laparotomy where a diagnosis of obstruction due to a large faecolith in jejunum was made.

CASE REPORT

A 88-year-old male patient presented with a two days history of vomiting, abdominal pain, progressive distension of abdomen and constipation with previous regular bowel habits. His past medical history included diabetes mellitus and hypertension. Physical examination

revealed tachycardia and dehydration. Abdomen was tender, soft and distended with absent bowel sounds. Blood tests showed picture of acute kidney injury with urea of 82 mg/dl and creatinine of 2.4 mg/dl. Normal electrolyte levels were found. There was no anemia or leukocytosis. Erect X-ray abdomen showed multiple air fluid levels and dilated small bowel loops suggesting intestinal obstruction. Plain CT of abdomen revealed a calcific intraluminal mass in the jejunum causing obstruction proximal to it. Patient was prepared for surgery and planned for exploratory laparotomy.

An emergency laparotomy was performed. Jejunum was grossly dilated and multiple large jejunal diverticula on the mesenteric border were present. 20 cms distal to duodenojejunal flexure an impacted faecolith was found. Involved part of jejunum with diverticular disease was resected and faecolith was extracted. Primary side to side anastomosis of jejunum was done and rest of the bowel was found to be normal. Patient recovered uneventfully in post-operative period and was discharged on 6th day. Histopathology of specimen also confirmed it to be benign diverticular disease.



Figure 1: Plain CT Abdomen showing calcific intraluminal mass in the jejunum with dilated small bowel loops.



Figure 2: Intra-op picture showing multiple large jejunal diverticula.



Figure 3: Faecolith, which was causing small bowel obstruction.

DISCUSSION

Small bowel diverticulosis was first described by Sommering in 1794 and later by Astley Cooper in 1809. Gordinier and Shil performed the first operation for diverticula in 1906.² Small bowel diverticulosis is thought to result from a combination of intestinal dyskinesia and abnormal peristalsis causing high segmental intraluminal pressures.³ This results in herniation of the mucosa and sub mucosa on the mesenteric border at points of weakness where blood vessels enter the bowel wall. In the small bowel, duodenal diverticula are five times more common than jejunal diverticula; however, the complication rate is five times higher in the latter.⁴

Jejunal diverticula are more common in males of old age^[5]. They are most often asymptomatic and tend to be diagnosed once a complication has occurred such as obstruction, hemorrhage, or perforation^[5]. In the acute setting, chest and abdominal X-ray may show evidence of perforation or obstruction. CT scan may also identify evidence of complications such as obstruction, perforation, or abscess formation.⁶ Even so, the final diagnosis is often only made at the time of surgery. In this case, Erect X-ray abdomen showed multiple air fluid levels and Plain CT of abdomen revealed a calcific intraluminal mass in the jejunum causing obstruction proximal to it.

Faecolith formation in a jejunal diverticulum is a rare event. Although not fully understood, they are thought to form de novo from choleic acid, the end product of bile salt metabolism.⁷ Bacteria within the diverticula deconjugate bile salts, which, in the presence of the acidic pH of the proximal small bowel, results in precipitation and stone formation.⁷

Faecoliths can remain in the diverticula and lead to complications such as small bowel obstruction when dislodged and very rarely, perforation from pressure necrosis, or acute necrotizing inflammation.⁸

Nonsurgical management has been described in stable patients with jejunal diverticular perforations and localized peritonitis.⁹ Mortality is influenced by patient's age, comorbidities, and timeliness of intervention. In patients presenting with severe hemodynamic instability, an alternative, safer approach would be resection and exteriorization of the bowel ends with delayed reestablishment of intestinal continuity. In this case, patient was hemodynamically stable, so he underwent primary anastomosis after resection of diseased part of jejunum.

CONCLUSION

Jejunal diverticula are the rarest form of small bowel diverticula and are usually asymptomatic. Jejunal diverticulosis is more common than reported, affects

usually older patients and must be considered in the differential diagnosis in patients with acute or chronic abdominal symptoms. A high degree of suspicion is necessary in view of the high mortality and morbidity rates resulting from a delayed diagnosis of the disease. Asymptomatic patients can be left alone but the treatment of choice is surgical excision of the affected jejunal segment in symptomatic or complicated disease.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Kotera SS, Chaithanya J, Hariprasad TR, Rajagopalan S. Large jejunal diverticular faecolith causing small bowel obstruction: a bizarre cause of an acute abdomen. *Int Surg J* 2019;6:3863-5.