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Perforated Jejunal Diverticulum: A rare case report

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Abstract
Perforated Jejunal Diverticulum is considered to be a heterogeneous disorder caused by numerous abnormalities of smooth muscle or myenteric plexus. The predominant complication witnessed in this disorder is wall lacking a muscle layer. Since it is asymptomatic, jejunal diverticulosis causes acute complications such as obstruction, perforation, hemorrhage. The goal of this study was to draw attention to a medical case about a perforated jejunal diverticulum. The case involves an 85-year-old woman with an acute abdomen. In this study, an early diagnosis, based on CT and resection of the jejunum affected is vital. It is important to consider the clinical diagnosis of perforated jejunal diverticulum as part of any evaluation of the acute abdomen, especially in this case where the patient is an elderly woman. This study also highlights the dangers of a delayed diagnosis as fatal for elderly patients hence the need for interventions such as surgery. For instance, the pressure created by generalized peritonitis or voluminous local abscess may complicate small bowel diverticulitis occasioning for operation. At times, non-surgical interventions present a solution for treating jejunal diverticulitis without peritonitis. However, this method does not prevent the recurrence of diverticulitis.

Key words: *small bowel, jejunum, diverticulosis, diverticulitis*

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I. Introduction

The perforated jejunal diverticulum is a rare disorder that results from the weakening of the muscularis. The disorder causes herniation in a small area of the mucosa and submucosa at the walls of the bowel. Most contrast studies locate the perforation at the mesenteric border with the postmortem studies increasing its visibility at the small bowels. [1] Like most jejunal diverticulosis, the perforated jejunal diverticula are often clinically silent (15%) and only express themselves non-specifically. [2]

II. Case Presentation

I account for the case of an 85-year-old woman presented at the emergency department with diffuseabdominal pain for 4 hours. Her medical history included arterial hypertension.Her vital signs were normal. Tenderness in the lower abdomen was found during her abdominal examination. From her blood tests she had WBCs 14.000 and CRP 2,6 mg/dl, the other tests were normal.

CT scanshowedfree intraperitoneal air round structures outside of the small- bowel lumen and below the diaphragm. The findings pointed to a possibility of a diverticular perforation that required exploratory laparotomy to determine. The patient underwent a surgical operation that revealed multiple jejunal diverticula. Moreover, the diverticula had proximal perforations, which led to the conclusion that they were the cause of the purulent fluid found in the abdominal cavity during the surgery. The perforations appeared at the mesenteric border close to the duodenojejunal junction.

The patient underwent an enterectomy and end-to-end anastomosis. The abdomen was washed out using large amounts of lavage fluids. It is worth noting that the studies of the resected specimen revealed prominent serosal inflammation under the diverticulum and hence it wasmassive diverticulosis. The patient had

no other postoperative complications and recovered progressively to be discharged home well 7 days after admission.

III. Discussion

Perforated jejunal diverticulum disease arises from rare disorders that cause small bowels to occur on diverticulosis. The 85-year-old woman is in the acute complication group, in which patients suffer different extents of complications. Konstantinos et al. (2009) describe jejunal diverticula as a major illness in the elderly that leads to mortality and should be suspected in those presenting with crampy abdominal pain [3]. Although the specific cause of the disorder is unknown, it has been associated with a combination of different abnormalities in peristalsis, intraluminal pressures, and dyskinesis that may occur in the intestines. Notably, abdominal discomfort such as in the case of elderly patients illustrates the pathological action of the disorder. The discomfort is a result of increased pressure on the intraluminal area [4]. The pressure in turn has serious complications among the small percentage of the patients who are symptomatic. The complications include hemorrhage, peritonitis, and intestinal obstruction.

It is worth noting that these disorders often affect the proximal jejunum with rare cases affecting the ileum [2]. The main target of the disease is the mesenteric vessel penetration point where they show few symptoms and are hard to identify unless they lead to further complications. Notably, the symptomatic patients' exhibit symptoms that are non-specific and do not necessarily point toward the disease. For instance, the patient such as in our case may experience acute abdominal pain. Some of the other symptoms include a different range of abdominal discomfort, vomiting, nausea, acute malabsorption, diarrhea, or dyspepsia.

Acquired jejunal and ileal diverticula is caused by internal dyskinesia and illnesses such as chronic abdominal pain, occasional vomiting, nausea, and diarrhea become early signs. These disorders also cause uncoordinated smooth muscle activity. CT is a crucial clinical procedure as it illustrates diffuse jejunal diverticula, extraluminal gas and thickened walls with inflammatory reaction. The massive diverticulosis like the 85 year old patient can cause inflammatory mass which may have gas (abscess), fluid collection, edema of the surrounding tissues and wall thickening of an involved segment.

Perforated jejunal diverticulum results in secondary complications that warrant surgical intervention. Jejunal diverticular illness presents as intestinal perforation and thus, medical practitioners should consider surgical repair.Non perforated jejunal diverticulitis can be prevented using antibiotics, bowel rest and intravenous fluids. In case of extensive diverticulosis, surgery should be indicated if there is a generalized peritonitis and should be done on intestinal segments without diverticula.

IV. Conclusion

Because jejunal diverticulosis is a rare clinical condition, most patients have no symptoms. Serious complications, such as diverticulitis and perforation, can nevertheless happen, as in the case that was reported. When an elderly patient presents with an acute abdomen, perforated small intestine diverticula should be taken into consideration in the differential diagnosis. In these patients, a delay in diagnosis can be fatal. Pneumoperitoneum is an unusual radiographic sign in these situations, but the doctor should be able to diagnose the patient based on this finding.

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