



## Multiple Diverticula of the Duodenum and Jejunum

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### ABSTRACT

**Introduction:** Duodenal and jejunal diverticulosis are relatively rare conditions compared to colonic diverticulosis.

**Case presentation:** 70-year-old lady, complained of generalized abdominal pain for 3 days, tender all over her abdomen, CT scan showed pneumoperitoneum, laparotomy done for her showed multiple small bowel diverticula.

**Clinical discussion:** Duodenal diverticula are more common than jejunal diverticula and are usually asymptomatic. However, they can lead to life-threatening complications [6].

**Conclusion:** While duodenal and jejunal diverticulosis can still cause significant symptoms and complications. Further research is needed to better understand the causes and optimal management of these conditions.

**KEYWORDS:** Diverticula, Multiple diverticula, duodenum, jejunum

### INTRODUCTION

Duodenal and jejunal diverticulosis are relatively rare conditions compared to colonic diverticulosis. There have been some studies conducted on the prevalence of duodenal and jejunal diverticulosis. One study published in the American Journal of Roentgenology in 2006 found that the prevalence of duodenal diverticulosis was 5.6% in a population undergoing abdominal CT scans. Another study published in the World Journal of Gastroenterology in 2011 found that the prevalence of jejunal diverticulosis was 2.3% in a population undergoing capsule endoscopy.

The exact causes of duodenal and jejunal diverticulosis are not fully understood, but it is believed to be related to age and other factors. Treatment options for duodenal and jejunal diverticulosis may include changes in diet, medication, and in severe cases, surgery [1], [2],[3],[4],[5].

### PRESENTATION OF CASE

A 70-year-old female known to have multiple comorbidities. She came to the Emergency on January 2023, with 3 days' history of abdominal pain started suddenly, associated with fever, She didn't pass bowel motion or flatus last 24h, also complaint of loss of appetite but no vomiting, on examination

showed tachycardia with hypotension no fever documented, she looks ill but fully conscious and oriented, distended abdomen with some tenderness in upper abdomen.

Radiological studies, x-ray no abnormality (Figs. 1) but CT scan appeared a Distend large bowel with maximum diameter reach 8 cm in the transverse colon with transition zone in the splenic flexure, associated with pneumoperitoneum suggesting perforated bowel loop, Feature of diverticulosis noted more in the distal part of the colon, also the small bowel loops also seen dilated with diameter in jejunal loops measure 3.5 (Figs. 2), (Figs. 3).

Then patient shifted to operation room, exploratory laparotomy created, showed Gush of air upon opening, Multiple small bowel diverticula, multiple small bowel diverticula were found mainly in the jejunum, large bowel and rectum looked healthy, however an area of multiple diverticulosis was resected so no anastomosis was done then Patient shifted to the ICU (Figs. 4), (Figs. 5), (Figs. 6), (Figs. 7).

In ICU patient kept intubated, after that by 48-hour Patient was taken to operating room for 2<sup>nd</sup> look, intraoperative there was no bowel content, pan diverticulosis from the duodenum until the large bowel, No obvious perforation or leak. Side to

side anastomosis was done then abdominal wall was closed. After a couple of days in ICU and regular ward patient was discharged from hospital after Tolerating regular diet passing bowel motion. On first visit in the clinic Histopathology showed: Small bowel mucosa with invagination of mucosa through muscle wall with surrounding chronic inflammation in keeping with diverticulitis and multiple dilated cysts in the wall (Figs. 1).

#### DISCUSSION

Duodenal diverticula are more common than jejunal diverticula and are usually asymptomatic. However, they can lead to complications such as perforation, and bleeding, which can be life-threatening.

The exact causes of duodenal and jejunal diverticulosis are not understood, but they are believed to be related to age and other factors. Treatment options for diverticulosis may include changes in diet, medication, and in severe cases surgery [2],[6],[7][8],[9].

#### CONCLUSION

Duodenal and jejunal diverticulosis are relatively rare conditions. Further research is needed to understand the causes and optimal management of these conditions [9]

**Consent:** Written informed consent was obtained from the patient for publication of this case report.

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**Ethical approval:** This case report is exempt from ethnic approval in our country.

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**Declaration of competing interest:** No conflict of interests.

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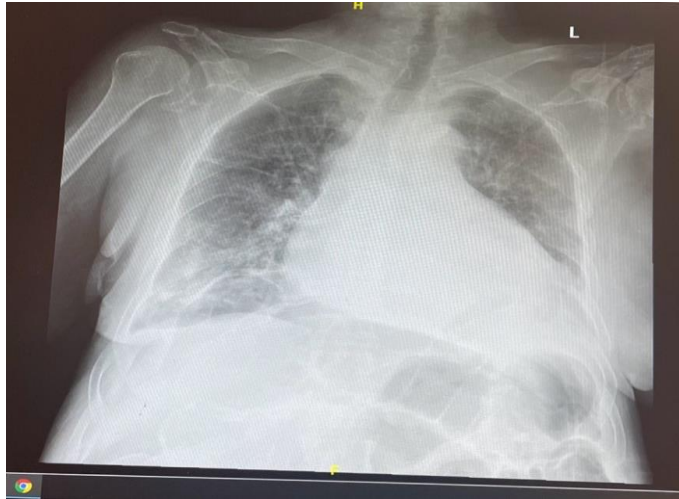


Figure 1: chest x-ray (showed no air under diaphragm)

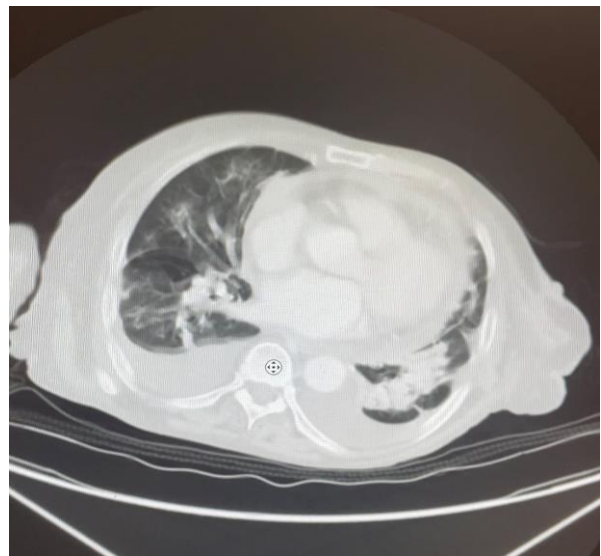
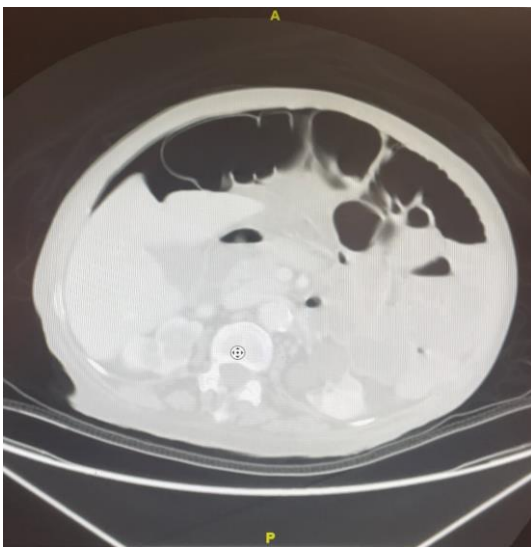


Figure 2,3: Ct scan abdomen (a Distend large bowel with maximum diameter reach 8 cm in the transverse colon with transition zone in the splenic flexure, associated with pneumoperitoneum suggesting perforated bowel loop, feature of diverticulosis noted more in the distal part of the colon, also the small bowel loops also seen dilated with diameter in jejunal loops measure 3.5

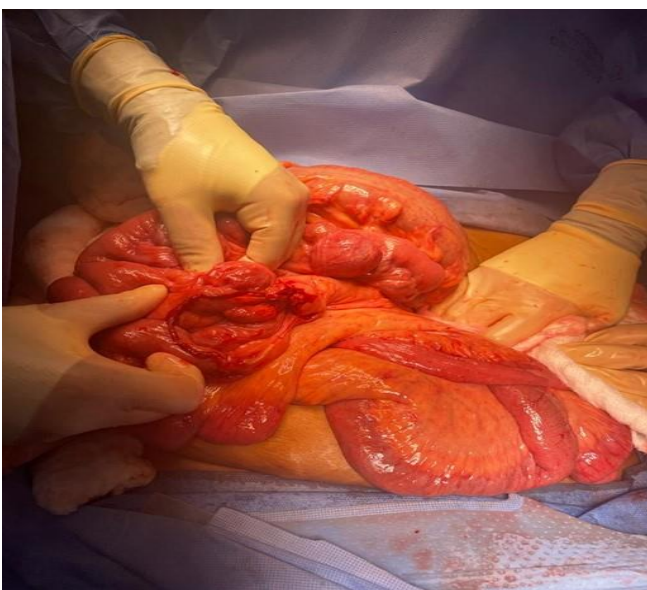


Figure 4

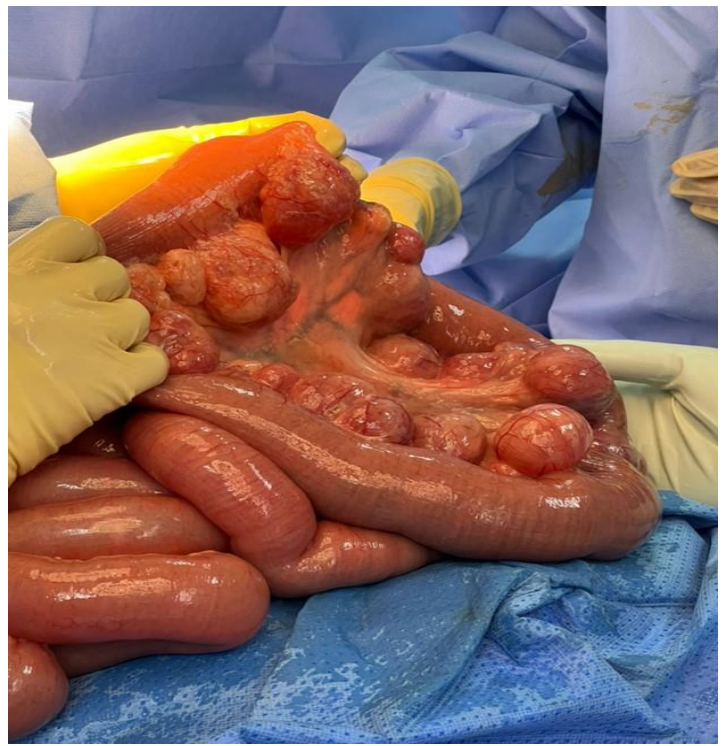


Figure 5

“Multiple Diverticula of the Duodenum and Jejunum”



**Figure 6**



**Figure 7**

**Figure 4,5,6,7:** during exploratory laparotomy (Multiple small bowel diverticula, multiple small bowel diverticula were found mainly in the jejunum).