TOTAL BOWEL OBSTRUCTION WITH RIGHT PARADUODENAL HERNIA: A RARE CASE REPORT

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Abstract

Introduction: Para duodenal hernia is an internal hernia type which categorized as a rare congenital anomaly due to defect in reduction and rotation of the midgut which can cause 1% of all obstruction cause. The interruption of blood flow in an intestinal segment beside the lumen obstruction characterizes the strangulation obstruction. The clinical symptoms are non-specific and it depends on the degree of obstruction. Clinical presentation of pain, vomiting, distension and constipation, laboratory, and radiographic factors should all be considered when deciding on the treatment of bowel obstruction.

Case presentation: A 79 years old man came to the hospital with chief complaints of difficulty to defecation for 1 week. Physical examination reveals that the patient has a distended abdomen with bowel sound still positive and icteric. Laboratory findings reveal an increase of bilirubin total and direct (17.78 mg/dL and 17.70 mg/dL, respectively) and mild hyponatremia (132 mmol/L). The patient was diagnosed with total hernia obstruction with a paraduodenal hernia. The patient undergoes laparotomy and durante operation, hemicolectomy dextra, and double barrel ileo-transversostomy were performed.

Conclusion: We found that this patient at Saiful Anwar General Hospital has paraduodenal hernia as the cause of total bowel obstruction. We perform resection of non-viable ileum and appendix + double-barrel ileo-transversotomy and excision of a hernial sac. The postoperative outcome in this patient is uneventful.

Keywords: Para duodenal hernia, Total Bowel Obstruction

INTRODUCTION

Para duodenal hernia is a rare congenital of malrotation midgut with a manifestation of 1% from all obstruction cause. Hernia duodenal is the most common cause of internal congenital hernia and constitutes a protrusion of bowel into retroperitoneal space through peritoneal defects near the third and fourth portion of the duodenum. Most of these internal hernias are also retroperitoneal, and they occur most often in the junction area of the duodenojejunal, about the cecum (pericecal) and sigmoid colon. At this point rudimentary fossa is often found; when they reach a sizeable proportion, as they rarely do, they may contain abdominal viscera[1,2]

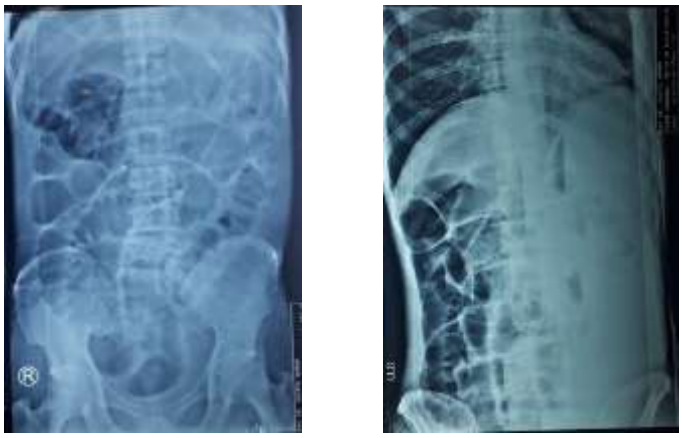
The diagnosis is often made perioperatively because clinical symptoms may be intermittent and nonspecific and include abdominal pain, nausea, vomiting, and abdominal distension. About 75% occur on the left side (Fossa of Landzert) and the remaining 25% is located on the right[3].

Asymptomatic or symptomatic hernias can eventually shrink because the small intestine protrudes through the defect in the abdominal wall and becomes trapped in the

hernia sac. An unidentified or irreversible hernia can develop into the intestinal obstruction and is an emergency in the field of surgery with clamping of the intestine that can become ischemic over time[4].

CASE PRESENTATION

A 79 years old man came to the hospital with chief complaints of difficulty to defecation for 1 week. The patient also had schizophrenia in a history of illness. At present, the patient is hemodynamically stable. Physical examination reveals that the patient has a distended abdomen with bowel sound still positive and icteric. Laboratory findings reveal an increase of bilirubin total and direct (17.78 mg/dL and 17.70 mg/dL, respectively) and mild hyponatremia (132 mmol/L). The patient was diagnosed with total hernia obstruction with paraduodenal hernia, mild hyponatremia, and schizophrenia. The patient undergoes laparotomy and durante operation, hemicolectomy dextra, and double barrel ileo-transversostomy were performed.



(A)

Figure 1. (A) Abdominal X-ray showed bowel obstruction with a suspect of malignancy

(A) (B) (C)

Figure 2. (A) Herniation of right side of the fourth portion of the duodenum and volvulus in terminal ileum 50cm from ileocaecal junction (B) (C) Volvulus releasing and diverticle at ileum part.

Herniation of the ileum segment was detected at the right side of the fourth portion of the duodenum. Volvulus in terminal ileum 50 cm from ileocaecal junction was found and necrotic until the caecum part. Resection of non-viable ileum and appendix + double-barrel ileo-transversotomy were performed. Volvulus was released and diverticle was also found at the ileum part. Histopathologic examination was performed and there is infarct of hemorrhage transmural and chronic appendicitis.

DISCUSSION

Total bowel obstruction caused by left paraduodenal hernia with entrapment of ileum terminal is rare. The presence of a PDH is not associated with specific symptoms and clinical signs, but with vague symptoms of chronic recurrent episodes of incomplete intestinal obstruction, such as abdominal pain, especially in the postprandial setting, nausea, and vomiting. A paraduodenal hernia will go undiagnosed until the development of an acute episode of complete small bowel obstruction, rarely accompanied by abdominal distention because the obstruction is proximally located[5]. In this case, small bowel obstruction happened distally which is rare, and patients come with complain of abdominal distention and difficulty to defecation. Patients also come in hyperbilirubinemia direct and mild hyponatremia which give clues to postbilliary obstructive symptoms.

Theoretically, the development of left paraduodenal hernia occurs when midgut rotates, initially behind, and then left to the superior mesenteric artery and comes to lie on the left side of the abdomen behind the mesentery of the descending colon. In a left paraduodenal hernia, the peritoneal defect lies to the left of the fourth part of the duodenum (Fossa of Landzert) and the anterior border of the hernial orifice is formed by the inferior mesenteric vein. Right-sided paraduodenal hernia is a result of midgut malrotation and failure of fusion of mesentery to parietal peritoneum creating hernial defect In the right paraduodenal, the small bowel herniates through the right paraduodenal fossa of Waldeyer[6,7]. In this case, right paraduodenal hernia was found and manifest in age 59 years. The intraoperative finding is not so robust which suggest only 50% of obstruction symptom will develop[8].

The surgical approach to a paraduodenal hernia is the same as that of any hernia, which is to reduce the hernia, restore the normal anatomy, and repair the defect. Timely surgical intervention is important due to the very high (50%) lifetime probability of incarceration or strangulation. The principal approach in paraduodenal hernia is the sac should be opened wide laterally, after identifying the duodenum and avoiding injury to the superior mesenteric vessels, to release the incarcerated small bowel into the peritoneal cavity. Once the sac wall is excised, the pouch effect towards the pelvis vanishes, and the anatomical location of the bowel is maintained[8]. In this case, patient volvulus was released and non-viable ileum was resected 50 cm. In figure 3 shows hernial sac and its relationship with superior mesenteric vein entrapment which the sac was excised afterward. The patient had an uneventful postoperative period.

CONCLUSION

We found that this patient at Saiful Anwar General Hospital has paraduodenal hernia as the cause of total bowel obstruction. We perform resection of non-viable ileum and appendix + double-barrel ileo-transversotomy and excision of a hernial sac. The postoperative outcome in this patient is uneventful.

CONFLICT OF INTEREST

There is no conflict of interest related to the materials or methods used in this study.

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AUTHORS' CONTRIBUTIONS

Authors took part in the design of the study, contributed to data collection, participated in writing the manuscript and all agree to accept equal responsibility for accuracy of the contents of this article.

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