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Mesenteric Side Perforation of Strangulated Sigmoid Colon Within A Left Inguinal Hernia: An Uncommon Case

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Abstract

A 83 years old man was operated due to the acute abdominal findings and left strangulated inguinal hernia. On the exploration, trapping of sigmoid colon in the left inguinal canal observed and colonic wall was partly necrotic. After reduction, when the peritoneum covering the mesentery of the colon was opened, posterior wall defect and colonic content was seen in the mesentery. This view explained the CT that shows free air without free fluid in the abdomen. End Colostomy with Hartmann's Pouch was the choice of the operation.

Keywords: Sigmoid Colon; Inguinal hernia; Colonic; End Colostomy

1. Introduction

The usual incarcerated organs are small bowel and onemtum in ingunal hernias; it is followed by large bowel and other intraabdominal structures [1]. Neglected inguinal hernias may lead to catastrophic results in elderly. Primary goal in elective repair of a reducible hernia is long-lasting closure and prevention of elective hernia hernia recurrence wheras the goals of emergent repair of a strangulated hernia may be to alleviate bowel obstruction, debride devitalized tissue, and/or mitigate the risk of abdominal catastrophe [2]. The cases with the sigmoid colon is stuck and presenting with the necrosis and perforation are rare in the Literature. Moreover, antimesenteric side perforations are much rarer cases and can be diagnosed with difficulty. Herein we would like to present very unusual case of strangulated inguinal hernia.

2. Case Report

A 83 years old patient was referred to our emergency department with Acute Abdomen prediagnosis. His complaints which has been present for three days were abdominal pain, swelling and redness in the left groinal area and reduction in gas and stool discharge. He had left inguinal hernia for 5 years and an operation was proposed; but did not accept. There's no past medical history except bypass operation he had 18 years ago, hypertension and right femural head fracture. On physical examination, there was tenderness and muscular defence in all quadrants. Left inguinal area was swollen, reddish and tender with palpation. Hernia was not be able to reducted. His remerkable lab values were; WBC: 10400 cu/ml, CRP: 54.4 mg/L and Creatinine: 2.2 mg/dL.

On CT examination, free air images were widely observed in the abdomen and especially in the epigastrium (Figure 1). Interestingly, although there was widespread air in the abdomen, there was no liquid. This situation was especially unclear about the source of GIS Perforation and It could easily be confused with a peptic ulcer perforation. The dilated descending colon segment (Figure 2) and prominent left inguinal hernia (Figure 3) were also seen on CT.

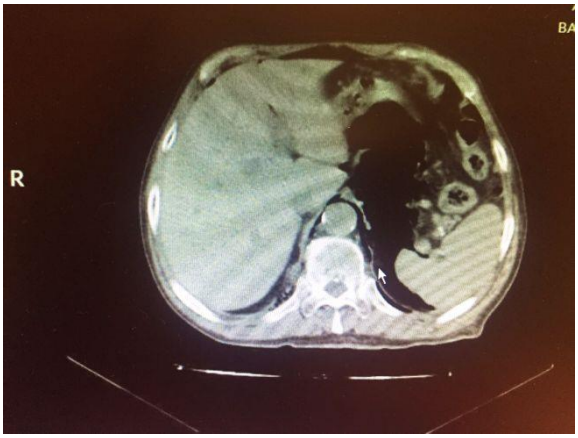

Figure 1: CT examination, free air images in the abdomen.

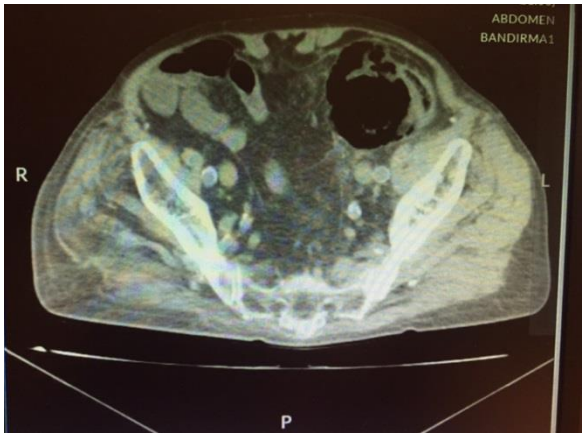

Figure 2: CT examination of the dilated descending colon segment.

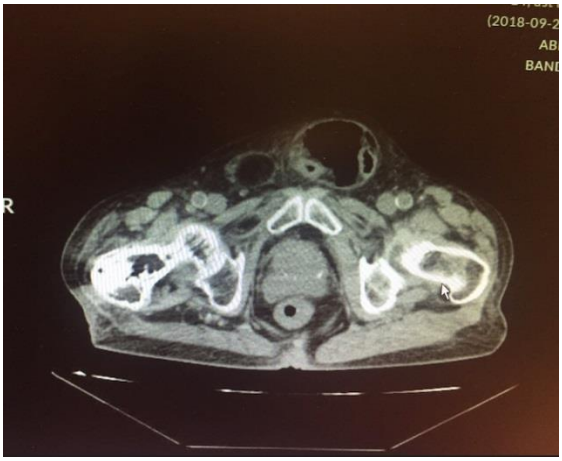

Figure 3: CT examination of prominent left inguinal hernia.

The sigmoid colon segment stuck in the left inguinal canal was observed in laparotomy (Figure 4); the segment was taken into the Abdomen. It contained necrotic areas of the surface, but any perforation hole or any intra-abdominal fluid was not seen. The resection was decided and colonic content was observed when the peritoneal leaf was opened that covered the mesenterium. Mesentery of the sigmoid colon was extremely thick due to contamination and inflammation. A hole in the mesenteric face was then seen and closed to prevent peritoneal contamination. Resection was followed by the End Colostomy and Hartmann's Pouch operation. We preferred the abdominal side closure to the hernia defect with interrupted sutures. Intraabdominal infection was controlled during postoperative period in patient experiencing lung problems due to the advanced age and lack of cardiac performance. Oral fluids were started after three days postoperatively. End colostomy started working on postoperative day four. The patient was able to discharged on the postoperative day 23th.

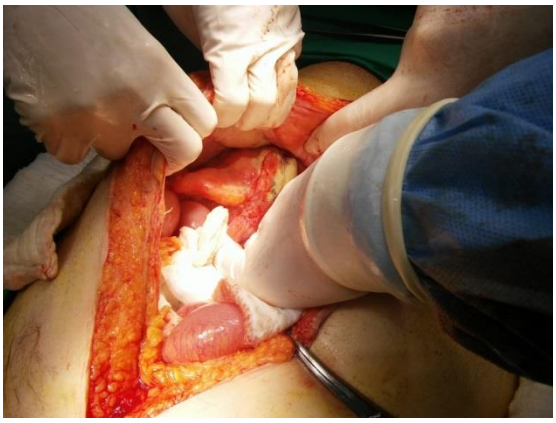

Figure 4: The sigmoid colon segment stuck in the left inguinal canal.

3. Discussion

The cases that the sigmoid colon is included in the inguinal hernia are rare in the Literature [3, 4]. Interestingly, cases with sigmoid carcinoma in the hernial sac were reported more frequently [5, 6]. Incarcerated tumor containing

segments may present with the perforation from tumoral region [7]. Perforated diverticulum may be the another cause of free perforation of trapped sigmoid in the inguinal canal [8].

Morgan RD et al. [9] reported a case of sigmod colon incarceration and perforation in a hernias similar to our case; however, the fecal fluid flows into the hernia to fill the scrotum. As reported in the cases of Morgan et al and Tuffnel et al. [8, 9], the perforated sigmoid colon in the hernia sac results in Intraperitoneal contamination. As in De Viries L et al. [10] case, In an elderly and immuno-pressive patient, sigmoid diverticulum in the hernia sac can be perforated and may lead to subcutaneous emphysema in the inguinal region. Anyway, almost all cases reported in the literature are elderly patients and have additional diseases [8-10]. What makes our case interesting is that the colon perforation was on the mesenteric side and the preoperative graphs showed only air-observed in the abdomen without free liquids. thus, there was no free colon content in the abdomen or testicular area in the laparotomy.

Incisions and drainage may be necessary in cases the groin area is infected [10]; however, It was not necessary in our case. Although cases with simultaneous hernia repair such as Bassini are reported in the old patient [8], the prevention of peritoneal sepsis and the reduction of the operation time were our priority and we postponed the definitive hernia repair of our patient. End Colostomy with Hartmann's Pouch is considered as the first choice with the reliability in the literatüre [8, 10].

4. Conclusions

Neglected inguinal hernia may cause catastrophic results in elderly patients. In cases suspected of sigmoid colon perforation, mesenteric side exploration should not be forgotten.

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