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Internal Hernia through a Defect in Hepatogastric Ligament - A Rare Case Report

Dr. Dhaval Kansagara[1], Dr. Bhavesh V. Vaishnani[2]

[1]Junior Resident, Department of General Surgery, P.D.U. Medical College and Civil Hospital Rajkot
Correspondence Address: Dr. Dhaval Kansagara, 111, new PG hostel, Jamnagar Road near RUDA building, Rajkot 360001

[2]Associate Professor, Department of General Surgery, P. D. U. Medical College and Civil Hospital Rajkot

Abstract: ***Internal hernias, including paraduodenal (traditionally the most common), pericecal, foramen of Winslow, and intersigmoid hernias, account for approximately 0.5–5.8% of all cases of intestinal obstruction and are associated with a high mortality rate, exceeding 50% in some series. To complicate matters, the incidence of internal hernias is increasing because of a number of relatively new surgical procedures now being performed, including liver transplantation and gastric bypass surgery. A significant increase in hernias is occurring in patients undergoing transmesenteric, transmesocolic, and retroanastomotic surgical procedures.***

Keywords: Hernia, hepatogastric ligament, intestinal obstruction

1. Introduction

An internal abdominal hernia is defined as the protrusion of a viscous through a normal or abnormal aperture within the peritoneal cavity.[1] The orifice can e either acquired, such as a postsurgical, traumatic, or post inflammatory, or congenital, including both normal aperture, such as the foramen of Winslow, and abnormal apertures arising from anomalies of internal rotation and peritoneal attachment.

The overall incidence of internal hernia is <1% and they account for 0.5-5.8% of all cases of intestinal obstruction[2,3].

Figure 1: Abdominal xray suggestive of multiple air fluid level

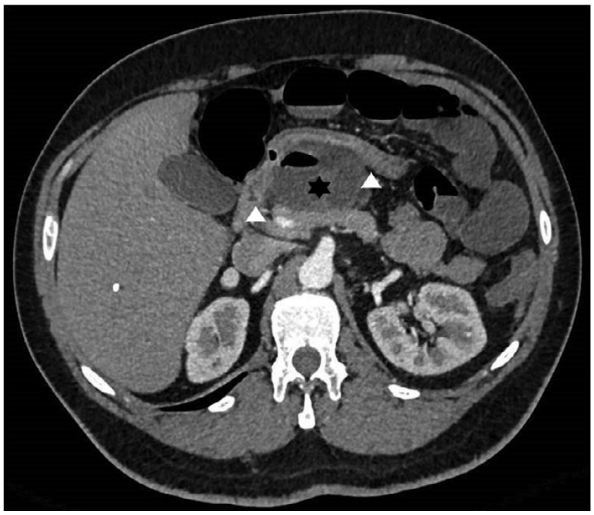

Figure 2: CT abdomen and pelvis suggestive of Unusual crowding of dilated and fluid-filled jejunal loops (black star) between the left liver lobe and the lesser gastric curve, dropping below and behind the stomach (white arrow)

2. Case Report

A 69 years old male patient was admitted in emergency department with abdominal pain which is generalised for 5 days. Pain was initially colicky, had become constant and increased in severity. This had been associated with multiple episodes of bilious vomiting, constipation and generalised abdominal distention. Patient had no h/o trauma and any known medical condition. His surgical history included TURP (trans urethral resection of prostate) for BPH 5 years ago.

On arrival patient was haemodynamically stable. His abdomen was mildly distended with generalised mild tenderness all over of abdomen. Lab test is unremarkable. A plain abdominal film demonstrated air fluid level suggesting internal obstruction.

Abdominal CT revels abrupt change in caliber involving mid ileal loop in right hypochondriac region with resultant

dilatation of proximal ileal loop and jejunal loop with max transverse diameter measuring 3.6 cm. Distal ileal loop appear collapsed.

A patient proceeded to exploratory laparotomy and there was a gap defect approx. 5*5cm size found in anterior layer at hepatogastric ligament through which close loop obstruction at approximately 10 cm at jejunum was found. But stricture at close loop are found passable. Proximal loop was appear dilated and inflammed and distal bowel loops appear collapsed. Rest of visible bowel loop were found normal There was no peritoneal contamination of enteric on purulent content Hepatogastric defect were closed with absorbable suture.

The post operative course is uneventful, with the patient resuming a normal diet. Regaining normal bowel function at sixth postop day.

Figure 3: Approx 10 cm jejunal loop herniated through a defect, stricture was present found passable

Figure 4: 5x5 cm2 defect found in hepatogastic ligament (margine hold by instruments)

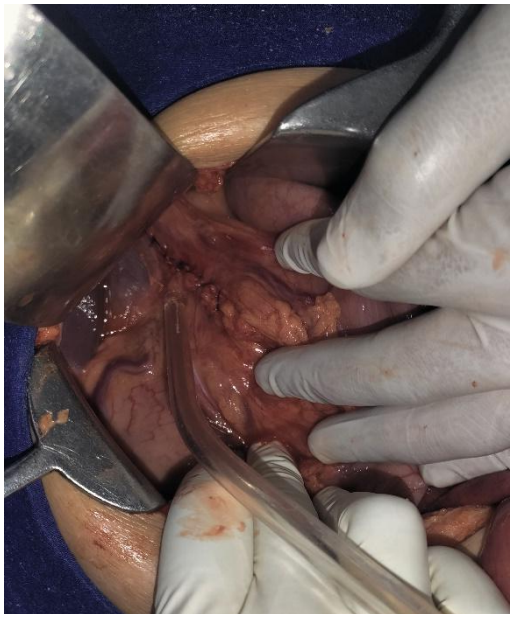

Figure 5: Defect was closed

3. Discussion

Transomental hernia through the greater or lesser omentum are rare accounting for approximately 1% - 4% all internal hernia.[3] They have been generally reported in patients over 50-years old and are mostly acquired [5], resulting from surgical interventions (Roux-Y gastric bypass, liver transplantation, small bowel or colon resection), abdominal trauma or peritoneal inflammation.[6-8] Internal hernias within the lesser sac may occur from various directions, namely, through the foramen of Winslow or through defects in the transverse mesocolon or lesser omentum. A case of herniation through the *pars flaccida* of the lesser omentum (or hepatogastric ligament) following laparoscopic fundoplication was recently reported.[9] Senile atrophy has been hypothesized as an etiological factor also our patient is 69 years old. Compared with other types of internal hernias, patients present more frequently with strangulation of the small bowel, thus radiologists and gastrointestinal surgeons must have a high index of suspicion to prevent delays in diagnosis and treatment.[10] Of note, laboratory tests may not always be significantly altered, even in the presence of bowel ischemia. Abdominal CT is the first-line imaging of choice. In the differential diagnosis of radiographic findings of intestinal obstruction or unusual appearing grouping of bowel loops, “some type of internal hernia”is often loosely entertained without a precise appreciation of types and distinctive findings.

However, with an awareness of the underlying anatomic features and of the dynamics of intestinal entrapment, the correct diagnosis can be made in most instances. The most useful diagnostic hallmarks include the following: (1) abnormal location and disturbed arrangement of the small intestine, (2) sacculation and crowding of several small bowel loops owing to encapsulation within the hernial sac, (3) segmental dilation and pro- longed stasis within the herniated loops and (4) mesenteric vessel swirling or crowding.[1] Nevertheless, in most cases, a definitive diagnosis is established intraoperatively.[11] Surgical treatment consists in careful reduction of the herniated small

bowel segment. If irreversible ischemia or perforation is found, resection is required. Additionally, the omental defect should be repaired to prevent recurrent herniation.

4. Conclusion

Although internal hernias were previously an uncommon cause of small-bowel obstruction, As illustrated in the present patient, who presented with small bowel obstruction due to spontaneous herniation through hepatogastric ligament. CT findings may play an active role in the diagnosis of this rare presentation.

Conflict of interest: Nil declared

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