Case Report

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Strangulated left para duodenal hernia in surgical emergency

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Abstract:

Para duodenal hernia is a relatively rare cause of small bowel obstruction, resulting from failure of mid-gut rotation during embryonic period. We encountered a case of left Para duodenal hernia causing strangulated small bowel obstruction in emergency. Due to nonspecific clinical presentation early and correct diagnosis of left Para duodenal hernia is difficult. Intestinal obstruction and strangulation may present in left Para duodenal hernia, so timely surgical intervention required for favourable outcome.

Key words: Emergency; Internal hernia; Para duodenal hernia; Small bowel obstruction; Strangulation

Introduction:

Para duodenal hernias, although rare in clinical practice, are the commonest internal hernias. Although internal hernias have an overall incidence of less than 1%, they constitute up to5.8% of small bowel obstruction [1]. If left untreated the overall mortality may exceed to 50%, if strangulation is present [2]. Here we describe successful management of a rare case of strangulated left Para duodenal hernia.

Case Report

A 40 yrs old male presented at the emergency department of our hospital with complaints of progressive abdominal pain, nausea, vomiting, unable to pass flatus and faeces for two day. The pain was colicky in nature started initially in the left Para-umbilical area and progressively involve the whole abdomen. The pain was non radiating with no provoking or relieving factors. There was neither fever nor diarrhoea. Patient complaint, multiple short episodes of abdominal pain since 14 years, but they used to resolve with medication within few hours. This time, he presented with similar symptoms but severity has increased. Previously no any other investigation was done.

Physical examination revealed a diffuse distension of abdomen with no visible peristalsis. On palpation there was a tender mass in the left Para-umbilical area which was firm, tender, around 4×5 in size. Rebound tenderness was found. On auscultation

bowel sound was absent. In per rectal examination ballooning was found.

Plain abdominal film shows multiple air-fluid levels and dilated jejunum loop on left side. USG abdomen shows dilated bowel loops noted with normal wall thickness and sluggish peristalsis. CT abdomen was not done.

A laparotomy was performed which shows a mass with incarceration of whole jejunum from duodeno-jejunal junction and some portion of ileum with mesentery in left side of infracolic retroperitoneal area. Rest portion of ileal loops were collapsed and free in abdominal cavity. Caecum was in normal anatomical position. All incarcerated bowel loops were reduced with difficulty and a sac with hernial orifice of size 2×1 was found. The Hernial orifice was left to ligament of trietz with opening on right side. Anterior to the hernial orifice was inferior mesenteric vein. The hernial orifice was closed with vicryl 2-0 suture. About one feet of jejunum was found to be gangrenous, and end to end resection and anastomosis was done. Rest of intra-abdominal organ were in normal anatomical position. Abdomen was closed with placement of pelvic drain. The post-operative course was uncomplicated and the patient has not experienced abdominal pain after discharge from the hospital.

Discussion

Internal hernias can be congenital or acquired. Acquired internal hernias usually result from failure to close a mesenteric defect after bowel resection. Congenital may be summarised as -Para duodenal (53%), Trans mesentric (12%), at the foramen of Winslow (8%), Para caecal (6%) and Trans omental (<5%). Over 400 cases have been reported in the literature [3]. They account for 0.2% to 0.9% of obstruction [3].

Unlike most type of internal hernias, this subtype (Para duodenal hernias) is more common in male (M: F= 3:1). There are two types of Para duodenal hernias; left and right sided. The left sided are more common (75%) [2]. It involves the Para duodenal fossa of Landzert, a fold that is present in approximately 2% of autopsies [2].

In 1923 Andrews proposed Para duodenal hernias can develop if an intestinal loop becomes interposed between the attachment of the mesentry and post-abdominal wall during early embryonic period in between fifth and eleventh week of gestation [4].

In 1935 Collander, Rusk, and Nemir believes that a left mesocolic hernia was produced when, the unsupported area of the descending mesocolon between inferior mesenteric vein and the posterior parietal attachment is invaginated by the small intestine as it migrates to left superior portion of abdominal cavity [5].

A mechanical theory has also been proposed on the basis for increased intra abdominal pressure forcing loops of intestine into pouches where fusion has not been complete [2].

Para duodenal hernias are quite difficult to diagnose in emergency. Presentation can range from acute intestinal obstruction to a long history of vague abdominal pain [1]. In these patients numerous investigations have been performed, without diagnostic yield, and are frequently assumed to have psychosomatic illness [5]. Most of the time patients have reversible intestinal obstruction but it may present as acute abdomen in cases of incarceration and strangulation [5]. Physical examination does reveal only the sign of small bowel obstruction. In emergency condition diagnosis is only possible at the time of surgery. However plain abdominal radiographs may shows an accumulation of small bowel loops in a segment of the abdominal cavity [6]. In the absence of acute abdominal emergency, CT abdomen is initial tool of investigation [7]. A characteristics finding is cluster of dilated small bowel loops seemingly encased in a sac and lying between the pancreatic body and/or tail and the stomach to the left of the ligament of Treitz [6]. The mesenteric vessels that supply the herniated small bowel segments are crowded together at the entrance of the hernia sac, and the vessels are engorged [6]. USG abdomen might also aid in the diagnosis. Suggestive findings include cluster of bowel loops or well defined mass. Peristalsis of the bowel loops can be appreciated and made more obvious with ingestion of water [7].

Treatment of left Para duodenal hernia requires surgery because obstruction will occurs in 50% of cases in the course of time [2]. Volvulus and strangulation of the herniated small bowel are frequent complication. The typical appearance during surgery is an “empty abdomen” with only last segment of ileum present in the abdominal cavity while other small bowel loops are entrapped in the hernia sac [8]. Surgical treatment follows the basic principle of hernia surgery: reduction of contents, restoration of normal anatomy, and repair of defect. Knowledge of anatomical boundaries of hernial orifice is important to avoid the damage of vital structures during surgery. The opening of left Para duodenal hernia is bounded anteriorly by the inferior

mesenteric vein and left colic artery, posteriorly by posterior abdominal wall and superiorly by Duodeno-jejunal flexure, pancreas and renal vessels. The inferior edge is free of vital structure and may be incised to widen the neck and allow reduction of herniated content [2]. Recently there have been reports of laparoscopic left Para duodenal hernia repair.

Conclusion

Possibility of internal hernia should be kept in mind while operating any case of intestinal obstruction in emergency.

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