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A Case report on Left-Sided Paraduodenal Hernia: rare cause of acute intestinal obstruction

ABSTRACT

Left paraduodenal hernia is a rare congenital abnormality which can be life-threatening by the fact that it can cause intestinal obstruction progressing to strangulation and perforation.

We report the case of a 16-year-old girl admitted for occlusive syndrome. Abdominal CT showed an intestinal obstruction; surgical exploration found jejunal loops incarcerated into left paraduodenal hernia.

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Keywords: Paraduodenal hernia, internal hernia, general surgery.

12 **1. INTRODUCTION:**

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14 Internal hernia is the protrusion of a viscus through a defect within the peritoneal or
15 retroperitoneal compartments. Those defects can be congenital or acquired

16 "There are several types of internal hernias, such as the paraduodenal Hernia which is the
17 most common type (53%)" [1].

18 Left para duodenal hernia is a congenital internal hernia [2, 3]. It accounts for two thirds of
19 the para duodenal hernias. Often asymptomatic, however, when symptoms do occur, they
20 can include abdominal pain, nausea, vomiting, and bowel obstruction which is a serious
21 complication that requires medical attention. [4].

22 Surgeons' knowledge of this abnormality can reduce their morbi-mortality. Hence the interest
23 of presenting this rare case.

24 **2. CASE PRESENTATION:**

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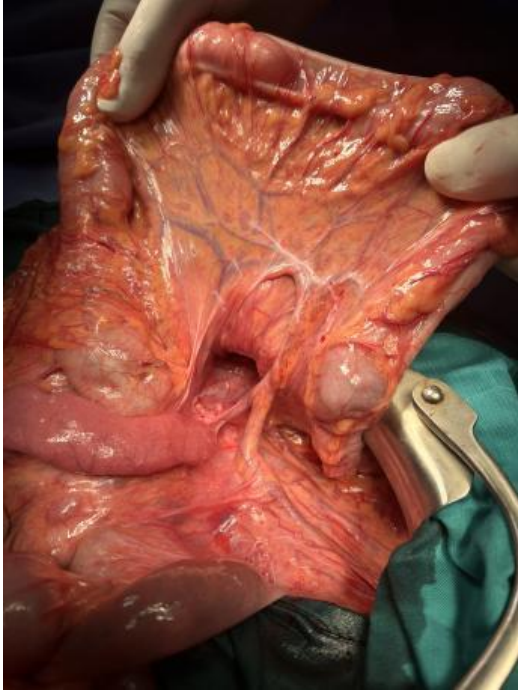
26 A 16 years old girl, with no medical history, admitted in the emergency room for an occlusive
27 syndrome (obstipation), colicky abdominal pain and vomiting. Clinical examination found a
28 distended abdomen with tenderness, the rectum was empty in digital rectal examination.

29 Biological screening was normal. A CT scan was performed and showed a bowel
30 obstruction.

31 Surgery was performed (Fig 1,2), and the exploration revealed incarceration of jejunal loops
32 in a left para duodenal hernia,

33 once the bowel was reduced from the paraduodenal space, the blood flow was reestablished
34 and the small bowel resumed a proper functioning.

35 Post-operative outcomes were uneventful



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37 Fig 1 : Operatory imaging showing a Left-sided paraduodenal hernia
38 (fossa of Landzert)

(fossa of

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41 Fig 2 : Surgical photo showing the paraduodenal hernia after closing the collar.

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44 **3. DISCUSSION**

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46 The left para duodenal hernia is the result of a failure of the peritoneal sheets of the treitz
47 fascia [5], due to an abnormality in the rotation of the primary intestinal loop during the
48 embryonic phase, which causes a defect in accommodation between the left mesocolon and
49 the retro peritoneum, resulting in a left para duodenal dimple called the Landzert Pit [5, 4].

50 “Left paraduodenal hernia (PDH) makes for around 40% of all internal hernias. It is due to
51 the prolapse of bowel through fossa of Landzert, an anatomic variant that is found in around
52 2% of the population. This hernia is presumed to be spontaneously reducible in many
53 patients with recurrent symptoms” [13].

54 “The pit is located to the left of the fourth duodenum and posterior relative to the inferior
55 mesenteric vein” [7, 8]. Para duodenal hernias account for 53% of internal hernias and left
56 para duodenal hernias account for 75% of para duodenal hernias [6]. Often asymptomatic or
57 manifests as vague abdominal pain with dyspeptic disorders [7, 9, 10]. They are rarely
58 complicated (0.2-0.9%) by the incarceration of small loops in the Landzert Trough leading to
59 occlusive syndrome by intestinal obstruction [6,7]. The diagnosis is made by the abdominal
60 scanner which objective an agglutination of the small loops to the left of the angle Jejunal
61 duodeno of Treitz [12, 11]. Treatment is a surgical emergency [12, 6]. It consists in releasing
62 the incarcerated hial, evaluating the vitality of the handles and closing the collar in separate
63 points with or without absorbable thread [7, 9]. The surgical approach can be open [9] or
64 laparoscopic with less postoperative pain, early recovery and a short hospital stay [6].

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67 **4. CONCLUSION**

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69 Paraduodenal hernias are congenital internal hernias that usually present with non-specific
70 symptoms, and are therefore rarely diagnosed preoperatively. Left-sided paraduodenal
71 hernias are the most common of the para duodenal hernias. Diagnosis is based on CT scan.
72 Surgery is the cornerstone of treatment.

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74 **ETHICAL APPROVAL**

75 As per international standard or university standard written ethical approval has been
76 collected and preserved by the author(s).

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78 **CONSENT**

79 As per international standard or university standard, patient(s) written consent has been
80 collected and preserved by the author(s).

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