



INTESTINAL OBSTRUCTION BY A LEFT PARADUODENAL HERNIA IN AN ADULTS: A RARE CAUSE OF OBSTRUCTION (A CASE REPORT)

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ABSTRACT

A congenital intra peritoneal hernia, also known as a "para-duodenal hernia, is an extremely rare cause of intestinal obstruction. These hernias, which are caused by variations in intestinal rotation, present with symptoms ranging from intermittent abdominal pain to acute obstruction

In this paper we describe a case of a 20 year old man having as antecedents an appendectomy 6 years ago and fracture of the right upper limb. He suffered from abdominal pain, notion of acute intestinal obstruction with vomiting for 24 hours in a context of apyrexia and maintenance of the general state. The paraclinical examinations posed the diagnosis of an internal left hernia. He had a laparotomy for reduction of the hernia. The patient tolerated the procedure without complications, and he was asymptomatic in the follow-up visit.

INTRODUCTION

Internal hernia is a relatively uncommon condition and is a rare type of intestinal obstruction. The types of internal hernia (in decreasing order) are paraduodenal, pericecal, foramen of Winslow, transmesenteric, transmesocolic, pelvic, intersigmoid, retroanastomotic, and transomentahernia [1].

These hernias are caused by variations in intestinal rotation and the patients present with symptoms ranging from intermittent abdominal pain to acute obstruction.

The left para-duodenal hernia obtains when the small intestine goes through the left paraduodenal fossa. It (the hernia) develops on the left, at the back of the descending mesocolon. It is considered the most common type of internal hernias.

Para-duodenal hernia is difficult to diagnose because of variable clinical presentation which may include acute intestinal obstruction and recurrent abdominal pain

In this study we describe the case of a young man patient suffering from abdominal pain with the notion of acute intestinal obstruction with vomiting for 24 hours. He had a laparotomy for reduction of the hernia

Case Presentation

A 20-year-old man patient approached the outpatient emergency of the Arrazi Hospital of CHU Mohamd VI, Marrakech, Morocco, complaining of abdominal pain, his last

bowel movement was three days before the presentation; however, he did not get his gas and he was vomiting for 24 hours in a context of apyrexia and maintenance of the general state. The patient reported that he had an appendectomy 6 years ago and fracture of the right upper limb, and his family history was normal.

On examination his vital signs were as follows: pulse rate as 98 bpm, blood pressure of 112/86 mmHg, and respiratory rate of 21 cpm, and he was afebrile, the abdominal exam objectified: an abdominal distention with a diffuse tympani, sitting on an abdominal defense, with at the rectal examination: an empty rectal bulb. The parietal hernial orifices were free. Abdominal radiograph showed air fluid levels [Fig. 1].

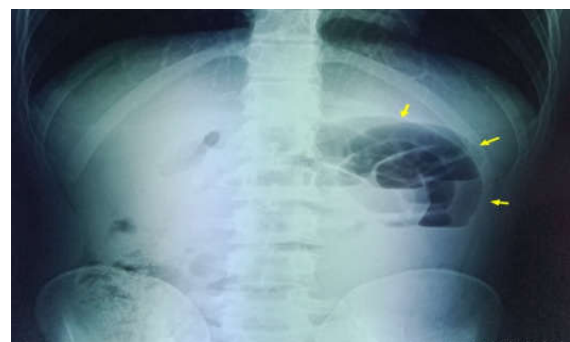


Figure 1 Abdominal radiograph hydro-aeric level

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CT scan of the abdomen was performed [Fig.2].distention of the digestive loops of the small intestine measuring 3.5 cm in maximum caliberwithindividualization of a hernial pseudo-cyst in the left hypochondriumcontaining digestive loops of the small intestine, associatedwith an image of a turn of the spiral below and inward, with stretchedappearance of the mesentericvesselstowards the hernial sac, this pseudo-cystwhichpushes back the stomach and the left colon. The remainder of the large bowel is completely collapsed.

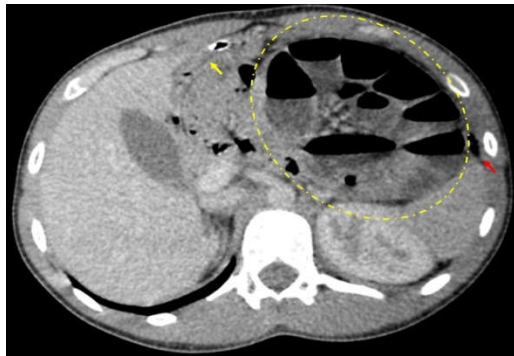


Figure 2 CT images of the abdomen demonstrating sac-like clustered small bowel loops (arrows) noted in the left upper quadrant, in the anterior pararenal space. Also note that the remainder of large bowel is completely collapsed.

In front of the emergency clinical picture and the results of the radiological examination, notably the abdominal CT scan, the indication for a surgical intervention was made.

After a median laparotomy, surgical exploration showed a left para-duodenal internal hernia, containing about 1m50 of the small intestine, the procedure consisted of a reduction of the herniated intestinal loops and resection of the hernial sac and closure of the para-duodenal fossa. The patient tolerated the procedure well; he received intravenous administration of analgesic drugs during the early postoperative 72 h. No early major and late postoperative complications were observed, and he was discharged on the fourth postoperative day with no active complaints during the follow-up visit.

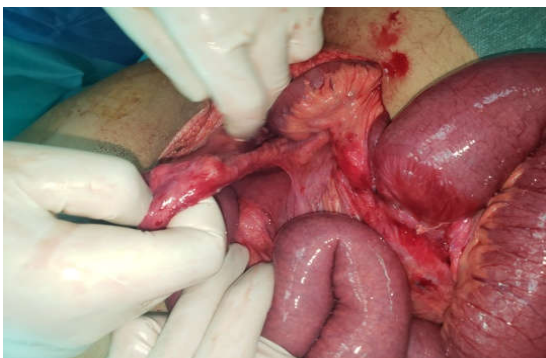


Figure 3 laparotomy view showing a left para-duodenal internal hernia, containing about the small intestine



Figure 4 laparotomy view showing a hernial pseudo-cyst in the left hypochondrium

DISCUSSION

Paraduodenal hernia, also known as mesocolic hernia, was first described at autopsy by Neubauer in 1786 [2]. Later, an accurate scientific description of the condition was provided by Treitz in 1857, who considered it a retroperitoneal protrusion of abdominal viscera [3]. In 1889, the classification of hernia into the distinct left and right types was made by Jönnesco [4].

They are a type of internal hernia and a rare cause of intestinal obstruction accounting for about 0.5% of all hernias [5]. They are the most frequent internal disorders (53%), they interest men three times more of ten than women.

Duodenal dimples are peritoneal folds that can arise from three mechanisms, accident of attachment of the peritoneum, folds of vascular origin (the vessels lift the peritoneal layer thus creating the dimples), or even the set two associated mechanisms. JONNESCO described 5 duodenal dimples maybe of surgical interest.

Left para-duodenal hernias are developed from the para-duodenal fossa of LANDZERT, the neck is located between the duodenal-jejunal angle above and the inferior mesenteric artery below, so that the free edge of the neck contains the mesenteric vein inside and upper left colic artery, the bag is therefore retro-mesocolic.

There are multiple theories about the mechanism of paraduodenal hernia formation. The most widely accepted theory was first described by Andrews in 1923, who postulated that it results from an embryological error during the midgut rotation. The failure of the mesentery to fuse with the parietal peritoneum of the posterior abdominal wall after the return of the herniated intestinal loops to the abdominal cavity in the early weeks of development creates a potential space of herniation behind the mesocolon.

The rare prevalence and the variable symptoms make the clinical diagnosis of paraduodenal hernia a diagnostic challenge. The clinical presentation is entirely non-specific. It ranges from being completely asymptomatic and found incidentally during surgery or autopsy to acute intestinal obstruction seen in 50% cases with the risk of gangrene and perforation [6, 7]. Such a myriad of clinical features often lead physicians to misdiagnose paraduodenal hernia as biliary disease or peptic ulcer resulting in patients receiving unnecessary therapeutic interventions.

Radiological signs, apart from complications are suggestive on images without preparation: absence of hial in the pelvis,

existence of a semi-circular and regular line encircling the descending colon and the sigmoid. The transit of hial must allow diagnosis in front of hialloop whose mucous relief is preserved are picked up and circled as if they were contained in a bag. The impression of the collaris most often visible on the last herniated loop. Finally, the handles are not moved by changes of position and manipulations. Currently, the CT scans superseded the upper gastrointestinal contrast studies as the abdominal CT scan became the diagnostic modality of choice. The CT findings show a smooth encapsulated sac-like mass of the small intestinal loops between the stomach and the pancreas at the level of the ligament of Treitz. Additionally, the displacement of mesenteric vessels may be apparent.

The treatment is surgical. Apart from complications, freeing the hial from the bag is usually easy, as the collaris wide (2); in case of difficulty it may be useful to open it, but bearing in mind the vascular risk at level of his anterior lip. You must then close the orifice of the dimple without necessarily resecting the sac.

Surveillance over a long period of these internal hernias shows that the evolutionist towards the complications (6). It therefore seems justified to treat all internal hernias diagnosed, even if they are asymptomatic or little symptomatic.

CONCLUSION

Although the frequency of internal hernias is low, 2% intestinal obstruction (3, 5), this should be considered in front of a high occlusion table in the absence of a history of abdominal surgery and externalized hernia. There is a large number of varieties of internal hernias and only a careful exploration of the abdomen carried out methodically from the last ileal loop until the first jejuna handle will make it possible to diagnose it and specify the type.

Herniated hial reduction poses generally few problems but a gesture of resection intestinal will be necessary more often than the intervention will have been late. Closing the breach hernias in rule of simple realization.

References

1. Review of internal hernias: radiographic and clinical findings. Martin LC, Merkle EM, Thompson WM. *AJR Am J Roentgenol.* 2006;186:703-717
2. Left paraduodenal hernia presenting with atypical symptoms. Yun MY, Choi YM, Choi SK, Kim SJ, Ahn SI, Kim KR. *Yonsei Med J.* 2010;51:787-789
3. Jannet J. Anatomie Topographique du Duodénum et Hernies Duodénales. Paris: Progrès Médical; 1889.
4. J. Jammart, F. Guillemin, P. Boissel, J. Grosdidier. Hernies trans-épiloïques. *Lyon. Chir.* 76 pp, : 49-50, 1980
5. M.K Bartlett, C.A. Wang, W.H. Williams. The surgical management of paraduodenal hernia. *Ann. Surg.* 168, pp: 249-254, 1968.
6. GG. Ghahremani, M.A. MEYERS. Internal abdominal hernias. *Surg. Clin. North. An.,* 64, pp :393-406, 1984
7. Incidental paraduodenal hernia found during laparoscopic colectomy. Brunner WC, Sierra R, Dunne JB, Simmang CL, Scott DJ. *Hernia.* 2004;8:268-270
8. Wachsberg RH, Helinek TG, Merton DA. Internal abdominal hernia: diagnosis with ultrasonography. *Can Assoc Radiol J.* 1994; 45(3): 223-4. PubMed | Google Scholar
9. Left paraduodenal hernia: case report and review of the literature. Tong RS, Sengupta S, Tjandra JJ. *ANZ J Surg.* 2002;72:69-71

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