

Laparoscopic Treatment of Retrocecal Hernia: Technical Notes and Literature Review

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Abstract

Retrocecal hernia is a rare cause of mechanical ileus and requires surgical treatment in emergency. Laparoscopy is not a frequent approach in this type of pathology. The diagnosis preoperative is not easy despite the TC can provide information to that effect. We present the case of a 52-year-old male patient with no comorbidity and never operated on the abdomen previously, which arrives in the emergency room with symptoms of acute abdomen. Practice direct Rx abdomen and TC abdomen that highlight an ileal stop without signs of decompensation. It is implemented, first instance, a conservative therapy, naso-jejunal tube and gastrographin intake by the way oral. Due to the persistence of occlusive symptoms, he underwent surgery after 24 hours. In laparoscopy we highlight a retrocecocolic hernia that strangles the last ileal loops. Proceed to section of the throttling track and to the opening of the entire laterocolic shower on the right with the resolution of the occlusive frame.

Laparotomy has been avoided; laparoscopy made it possible to diagnose and guarantee a minimally invasive treatment with rapid recovery of the patient. We did not consider it appropriate to close the hernial orifice as described by several authors in the literature. The technique is described laparoscopy comparing it with other authors.

Keywords: Paracecal Hernia, Retrocecal Hernia, Laparoscopic Treatment, Surgical Technique

Introduction

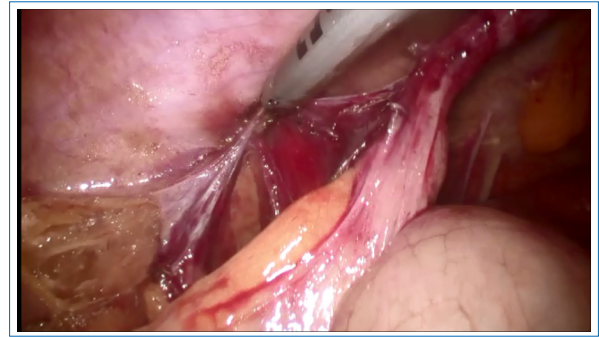
Paracecal hernias are extremely rare internal hernias. They would seem hernias acquired at the expense of the retrocecal dimples. Three varieties have been described: retrocecocolic hernia, retroileocolic hernia and ileoappendicular hernia [1]. The hernia can go back up to the right kidney or duodenum and then move the right colon outwards or inside. The frequency and the relationship between the sexes remain unknown. In Japan from 2000 to 2014 only 16 cases were reported in the literature [2]. Symptoms are those of acute abdomen from mechanical ileus. Diagnosis is often carried out at the operating table. Internal hernia is a potentially lethal condition, early detection and emergency intervention is the only chance of success. The approach is almost always laparotomic although in recent years, in the literature, several cases are been treated in laparoscopy with considerable benefit in terms of post-operative recovery. The technique suggested in our case report does not provide for the closure of the throttling orifice.

Clinical Case

Male patient aged 52, comes to our observation complaining of abdominal swelling, sudden cramp-like pain localized mainly in the right iliac fossa, closed alve a faeces and gas for 12 hours, nausea and bilious vomiting. Apyretic, heart rate 90 beats per minute e blood pressure 140/75 mmHg. Deny previous abdominal surgery. Exams hemochemicals show a neutrophilic leukocytosis (16000 mm; 87% neutrophils).

At the visit the abdomen shows no signs of trauma, is relaxed and not treatable on palpation, weak peristalsis and reduced entero-colic tympanism; Blumberg weakly positive. They don't show hernias of the abdominal wall. Practice Rx abdomen that highlighted some level hydro-plane and distension of the small intestine. Perform TC abdomen with mdc which highlights: "water overdistension, with some hydroaerial level, distal fasting and proximal-medial ileum, with apparent abrupt passage between lying loop and loop connected to the right iliac fossa. Not signs of vascular suffering of the wall of the loops. Absence of free fluid in the abdomen". The diagnostic doubt remains on the cause of the mechanical ileum. Not being a decompensated ileus proceeds to position the naso-jejunal tube, the bladder catheter, fasting and therapy infusion and administration

of water-soluble contrast agent for os (gastrografin). To a distance of 6 and 12 hours is repeated RX abdomen that highlights stasis of the contrast medium up to the ileal loop. After 24 hours the patient underwent surgery. Patient under general anesthesia, in supine position and with the laparoscopic column on the right side of the patient. It is submitted to surgical treatment by laparoscopy considering that the ileal distension of less than 4 cm allows the creation of an adequate operating room (Laparoscopic Adesiolysis - Guidelines - ACOI) with the pneumoperitoneum induced by Verres needle at the Palmer point at 12 mmHg. The Optical trocar is placed in the left hypochondrium along the anterior axillary line (away from the stop highlighted at the TC in the right iliac fossa). The first 5 mm operator trocar is positioned in the umbilical area along the dawn line and the second 5 mm trocar in the suprapubic site along the midline pubic navel in order to exploit these laparoscopic accesses for a possible laparotomic conversion (photo 1) and to favor a good triangulation. Abdominal exploration allows you to follow the empty loops (like a thread of Arianna) until the stop in the paracecal site. It therefore highlights an internal retrocecolic hernia with involvement of the last ileal loops and of the appendix (photo 2 and 3). The ileal loops are reduced in the abdomen, their vitality appears good therefore it is not necessary to perform ileal resection while the appendix shows signs of acute inflammation and therefore we proceed to appendectomy. The orifice is not sutured but is sectioned and open, like a book, along the whole later colic shower in the space between Toldt e Gerota fascia because the herniated loops had reached the right kidney occupying this species of long "hernial" sac (photo 4). Drainage was not positioned. The post-operative course was regular: alvo channeled in 1 postoperative day and was removed the naso-jejunal tube, liquid diet on the second day and discharge on the fourth day postoperative.



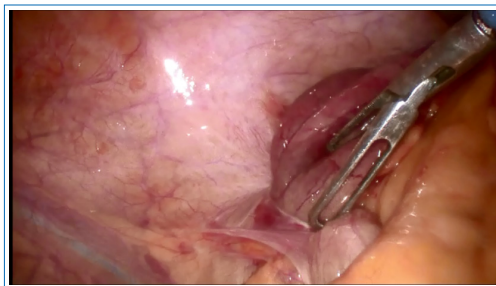
Discussions and Conclusion

A defect affixing the blind man, with his meso and peritoneal assumptions that can be lassi and constitute peritoneal plications during fetal intestinal rotation movements, it can create dimples: retrocecolic, retroileocolic and ileoappendicular in which the intestine he can come to incarcerate himself.

Pericecal hernias determine a mechanical ileus in 1% of cases [3]. The presence of the hernia is generally asymptomatic if there are no complications. It can cause cramping pains intermittent in the right iliac fossa that often resolve spontaneously even though determining an alteration of the alvo [4]. The most important clinical manifestation is the strangulation of the loops herniate with a clinical picture of acute abdomen [4].

Diagnosis is often performed at the operating table even if the TC is the first exam level in the patient with suspected internal hernia [5]. The radiological features are well synthesized in the work of Shingo Ito et al. of 2017: a mass in the right iliac fossa with dilatation of the child gut and abrupt passage between dilated loop and empty loop in paracecal, blind and right colon dislocated laterally or medially, vascular axis of the months that are stretched and converging towards the hernial orifice [6].

Laparoscopic treatment is recent; the cases treated and described in the literature are still few. Omori Hiroaki et al., In 2003, published the second case in the literature treated by way of laparoscopy [7]. Much Aguado M et al, in 2007, published a case report on Hernia by laparotomy and highlighted how difficult the pre-operative diagnosis could be negatively affect the type of surgical approach; Aguado indeed claims that the two cases treated laparoscopically and cited by Omori they were able to enjoy a faster recovery post operator [4]. Sasaki K. et al. in a review of 15 cases in Japan, published in 2016, highlight how laparoscopic treatment was performed in only four out of 16 cases, including their case report [8]. Laparoscopy is therefore not yet the treatment of choice and this is due to difficulties pre-operative diagnosis rather than the laparoscopic ability of the surgeon. In fact, in the same review, in 8 out of 15 cases the diagnosis was uncertain or erroneous because it depended on complicated appendicitis. The position of the trocar in laparoscopy is described only by Akira Kabashima who positions the trocar 10 mm optic in the navel and the two 5 mm operator trocars in the right iliac fossa and right flank [9]. We consider this position of the trocars uncomfortable. We placed the 10 mm optical trocar in left hypochondrium (hence far from the "mass" highlighted at the TC in the right iliac fossa) and two 5 mm trocars along the navel-pubic line in order to obtain a better triangulation and have accesses along the line of any laparotomic conversion. Some authors cited propose closing the orifice while others opening it along the lateral shower;



there are no substantial differences with regard to recurrences. The timing of recovery and hospitalization in patients undergoing laparoscopy are significantly lower than to laparotomic ones. In conclusion we can say that laparoscopic treatment for this type of hernia occlusion internal is constantly growing if supported by a correct pre-operative instrumental diagnosis; that the position of the trocars is “à la demande” but we must favor the correct triangulation of the tools and get away from the “mass site”; that the postoperative hospital stay, that the closure of the orifice or its opening do not show differences in terms of relapses and that the recovery of the canalization and feeding are much faster in laparoscopy.

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