

Management of Giant Spiegelian Hernia in Ziguinchor Regional Hospital: A Case Report

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Article Information

Received date: Dec 13, 2017

Accepted date: Dec 21, 2017

Published date: Dec 27, 2017

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Keywords Spiegelian hernias; Raphy; Strangulated

Abstract

Spiegelian hernia is a rare entity, accounting for 0.10 to 1% of hernias. It is a protrusion of a peritoneal sac through an acquired or congenital anatomical orifice of the Spiegel line or semi-lunar fascia. We report a case of Spiegelian hernia in a 4-year-old girl with no pathological history, received for a right para rectal mass. Physical examination revealed a non strangulated spiegelian hernia of 13 x 12 cm. It was treated by a peritoneal closure according to lazaro Dasilva's like technique with interposition of a polypropylene mesh. Spiegelian hernias are rare congenital malformations in children. It can be diagnosed clinically but sometimes requires paraclinical explorations (sonography or computed tomography). Surgical management has good results.

Introduction

Spiegelian hernia is a rare entity in children [1,2]. Its overall incidence is estimated to be about 0.10 to 1% of hernias [3]. It corresponds to a protrusion of a peritoneal sac through an acquired or congenital anatomical orifice of the Spiegel semi-lunar line or fascia [2]. We report a case of Spiegelian hernia in a 4-year-old girl received at the Ziguinchor Regional Hospital and treated with the Lazario Da Sylva technique with good evolution.

Case Report

It was a 4-year-old girl with no pathological history, received in external consultation for a right para-rectal mass that has been evolving since birth and gradually increased in volume without any disturbances in transit and without alteration of the general condition. On examination, we could see a mass occupying the right iliac fossa measuring a 13 x 12 cm diameter; it was soft, painless, reducible and expansive to cough, with no inflammatory sign (Figure 1). The reduction was accompanied by a gurgling characteristic of intestinal reintegration. The rest of the physical examination showed no specificities. The Ultrasound showed a right spiegelian hernia containing intestine without any other malformations. The diagnosis of right Spiegelian hernia was based on clinical and ultrasound evidence. The Surgical exploration showed a right Spiegelian hernia of 9 cm diameter (Figure 2).The surgery consisted in intestine reduction after a transversal supraumbilical,



Figure 1: Right anterolateral deformation of the abdomen.



Figure 2: Peritoneal sac containing epiploon and intestine.

dissection and incision of the peritoneal sac. The closure was done according to Lazaro Dasilva's like technique with interposition of a polypropylene mesh. After incision we have a medial flap and a lateral flap. The lateral flap was sutured to the anterior right rectus. We made a fixation of a polypropylene mesh (mersilene) on the peritoneal lateral flap. Secondly the medial peritoneal flap is sutured on the transverse right muscle recovering totally the polypropylene mesh. The patient's postoperative course was uneventful and she was asymptomatic with an intact repair after 6-month of follow-up.

Discussion

The semi-lunar line was first described by Adriaan Van der Spiegel in 1645 [4]. This line extends from the anterior margin of the costal cartilage to the pubis.

Spiegelian hernias are rare in children [2,5]. Their incidence is clearly increasing, given the improvement of modern imaging techniques [2]. It occurs both in men and women with a sex ratio of 1.4 and an age between 40 and 70 years [6]. In children the etiology of spontaneous Spiegelian hernia remains a subject of controversy. A congenital abnormality in the development of the abdominal wall secondary to a structural change of the external and transverse muscles, the infiltration of muscles by fat and muscular paralysis is the most incriminated cause [3]. Most Spiegelian hernias cases described in children are spontaneous and idiopathic; but some authors report cases of postoperative and post-traumatic hernias [7]. In our case, we report a congenital hernia.

Clinical signs are not very specific and can be summarized as a swelling of the iliac fossa and/or flank. These symptoms are usually painless and reducible due to the intra-parietal situation of Spiegelian hernia [4]. As in our case, Spiegelian hernia is more frequently described on the right side [8]. In rare cases, Spiegelian hernia can manifest itself by a complication such as a hernial constriction causing acute intestinal occlusion [3,4,9]. Sonography is very important in the diagnosis of Spiegelian hernia [3,4]. Ultrasound reveals the hernial sac between the external and internal oblique muscles, as well as

the solution of continuity at the Spiegel's line [5,10]. Computed Tomography (CT) has a much higher sensitivity and specificity than ultrasound in the diagnosis of Spiegelian hernias [3,4]. The diagnosis of Spiegelian hernia in our patient was based on clinical and ultrasound evidence.

The treatment of Spiegelian hernia is surgical [3,4]. This treatment should be initiated as soon as possible because the risk of incarceration or strangulation is significant and can go up to 32% [2,3].

The choice of the intervention technique depends on the diameter of the hernia and the possible complications. Medial laparotomy is indicated only in hernial strangulation, for it allows an easier handling of the hernia and a complete exploration of the abdomen [5,10]. For our case an elective incision was chosen because of the size of the hernia. Currently, several authors use the laparoscopic approach for the treatment of Spiegelian hernia [2,3]. The surgical treatment can consist on a parietal suture like a Lazaro Dasilva technique or the implantation of prosthesis [1]. Laparoscopic approach gives to the patient the least morbidity and shortens hospital stay to the extent that it can be performed easily as an outpatient procedure [3]. In our case, a peritoneal suture according to the technique of Lazaro Da Silva with an interposition of a polypropylene mesh between the two peritoneal flaps was done. Our technique is justified by the size of the Spiegelian hernia. In our case we chose open surgery approach because of the diameter of the hernia and in the availability of laparoscopic support in our hospital (Figure 3). Postoperative management of Spiegelian hernias are often simple in many studies [2,3,5]. Results with the classical techniques are good as regards morbidity and mortality [3,7]. The long-term advantages or recurrences of prosthetic repair methods in pediatric cohorts remain obscure because of the very small number of cases reported [3,4,7]. In our case after six months no recurrences or complications were seen in the girl (Figure 4).



Figure 3: preoperative view (we can see a right anterolateral mass on the Spiegelian line).



Figure 4: View six month after surgery.

Conclusion

Spigelian hernia is rare in children. It is often diagnosed at the strangulation stage. The parietal repair can be done by a raphie or prosthesis. Laparoscopy is an alternative to the classical approach.

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