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Case Report

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Amyand's Hernia: A Case Report and Current Treatment Recommendations

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Abstract

Amyand's Hernia (AH) is defined as the protuberance of the vermiform appendix, inflamed, infected, perforated or normal, within the inguinal hernia sac. The prevalence of the AH in the world population is around 0.4-0.6%. While among children, it is about three times more prevalent, owing to patency of the vaginal peritoneum conduit and is more common in men. This Article report a case of AH in an eleven-month-old male who was diagnosed intraoperatively during an elective surgical treatment of bilateral inguinoscrotal herniorrhaphy (as evidence suggests to be what occurs in most cases of AH), when an appendectomy was performed with no unforeseen circumstances. It is essential discussing the diagnosis and treatment of Amyand's hernia as a way of making surgeons aware of this differential diagnosis.

Keywords: Amyand; Appendix; Inguinal Hernia; Pediatric Surgery

Background

Amyand's Hernia (AH) is defined as the protuberance of the inguinal canal, result from a normal, inflamed or perforated appendix within the inguinal hernia sac [1]. This condition was described by Claudius Amyand in 1735, when he first encountered an inflamed and perforated appendix herniated in the inguinal canal [2]. Due to the rarity of the AH, it is difficult to estimate its prevalence. However, recent studies suggest the prevalence of AH to be of 0.4-0.6% with respect to world population. While among children, it is about three times more prevalent, possibly reaching a rate of 1%, due to the existence of the patent vaginal peritoneum conduit[1]. Clinically, AH is very similar to an incarcerated or strangulated hernia and, since the diagnostic of a strangulated hernia is clinical, its correct preoperative diagnosis is seldom established, for that reason the disease is normally an incidental finding during surgery [1,3-5]. The aim of the present study is to report a case of a child with bilateral inguinoscrotal hernia, with the presence of a vermiform appendix within the hernial sac.

Case Report

AMS, 11 months old, male, from Juiz de Fora - Minas Gerais, Brazil, was referred from the paediatric surgery ambulatory with a diagnosis of a non-complicated bilateral inguinoscrotal hernia for performance of an elective bilateral inguinal herniorrhaphy (Figure 1).

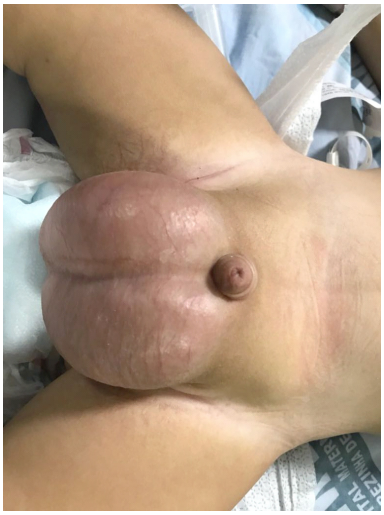

Figure 1: Panoramic view of bilateral inguinoscrotal hernia.

At the time of examination, there was a bulging and evident thickening of the bilateral inguinal canal. There is no phlegmous signs on site. The patient underwent elective surgical treatment, inguinoscrotal herniorrhaphy, by bilateral inguinotomy. Intraoperatively, the hernia sac was approached, which presented neither perforations nor pus, but contained the intestinal loop segment (terminal ileum), cecum and appendix. All of them were well perfused, but swollen. The hernial sac was opened, followed by visceral exposure and incidental appendectomy. Subsequently, the reduction of the structures back to the abdominal cavity was conducted through use of the internal inguinal ring. During the manipulation of the visceras back to the abdominal cavity, the cecum was perforated (Figure 2).

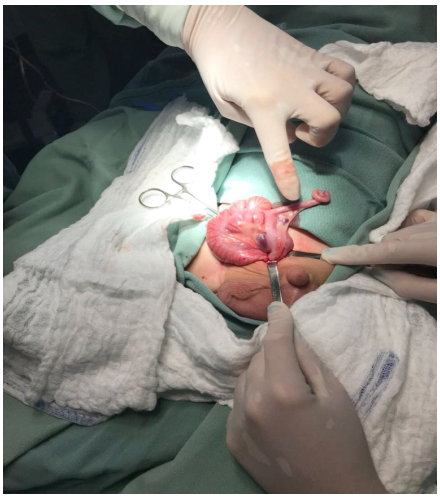

Figure 2: Intra-operative view showing cecum and appendix in the inguinal right hernial sac.

This intercurrence was promptly diagnosed and handled through suturing the affected site, and administration of antibiotic therapy (Metronidazole + Gentamicin). Finally, the herniorrhaphy and contralateral inguinal approach were used to close the surgery, in which there was no presence of intestinal loops inside the hernial sac. After the procedure, the patient was maintained on a nothing by mouth regime for 48 hours as well as antibiotic therapy. In the immediate postoperative period. The child was discharged on the fifth postoperative day, with medical instructions and antibiotics to be administered at home for the following five days (Figure 3).

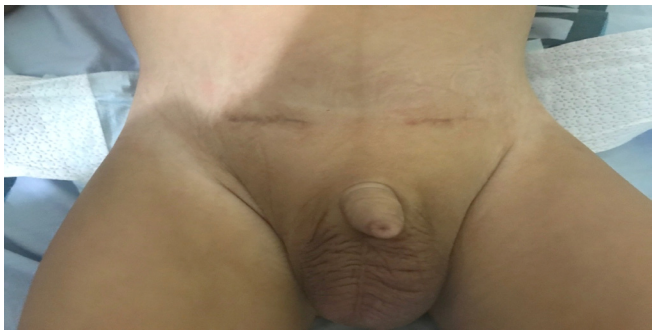

Figure 3: Esthetic aspect of post-operative follow-up.

Discussion

Amyand's Hernia occurs three times more commonly in children, owing to patency of vaginal peritoneum conduit and is more common in men [6]. Different theories have been proposed for the occurrence of AH, which suggest some reasons that could lead the appendix to stay inside the sac, such as: presence of a long appendix in pointing to the groin and/or random peritoneum reflections and redundant cecum [2,7]. Furthermore, it is believed that appendicitis in the AH is caused by extra luminal compression, which creates appendix edema with narrowing of the ring as well as contraction of abdominal wall muscles and, consequently, incarceration and bottleneck [4]. In the hernia´s natural history, acute or chronic incarceration and bottleneck are frequently found and immediate surgery intervention is required in case of bottlenecking of the hernia [4]. In the present case report, the patient underwent an elective surgery for herniorrhaphy and did not show any signals or symptoms that indicated a complicated hernia. Hence why we could only make the diagnosis during the surgical procedure (as evidence suggests to be what occurs in most cases of AH). Furthermore, even though an abdominal computed tomography before the surgery may be useful for the correct diagnosis, it is not common practice [1,3-5,10]. The presence or absence of both appendicitis and periapendicular abscess is very important to determine the treatment of AH [8]. In the mentioned case, the patient had a non-complicated appendix in the hernia sac. According to literature, most surgeons decide to keep the appendix in events like these [9]. However, others such as Johari

et al. 2009, advise to perform an appendectomy in all contexts of AH of the right side, because in a situation of this sort the cecum is movable, or the patient has situs inverse or poor bowel rotation which can lead to future appendicitis that will have an atypical clinical presentation. Consequently, in this case, an appendectomy was performed [10].

Conclusion

The case reported and studies that have already been published shed some light on the discussion regarding AH, which is a rare condition, most common in children, given the existence of the vaginal peritoneum conduct. Therefore, it is imperative to warn surgeons about the correct diagnosis and treatment of this pathology. The surgeon must always keep in mind this differential diagnosis in cases of right inguinal hernia incarcerated and/or bottlenecked.

Conflict of Interest Statement

All authors have no conflict of interest to declare.

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