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Case report

Vermiform appendix in an inguinal hernia. What to do?

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Abstract

Introduction: A vermiform appendix in an inguinal hernia, inflamed or not, is known as Amyand's hernia. Here we present a case of a men with Amyand's hernia.

Technical Note: A 34-year-old male presented to the general surgery clinic with the complaint of a right inguinal bulge for the last two years, and a 6-month history of local pain on exertion with worsening of pain in last 12 hours. Physical examination showed an inguinal bulge to the right-side during Valsalva's maneuver, and the cough test revealed an indirect hernia.

Conclusion: A hernia surgeon may encounter unexpected intraoperative findings, such as Amyand's hernia. It is important to be prepared and apply the appropriate treatment.

Keywords: Hernia, Inguinal; Appendix; Herniorrhaphy

Introduction

In 1735, Claudius Amyand described the presence of the vermiform appendix inside an inguinal hernial sac, and the condition has been known by his name ever since [1]. According to the literature, the incidence of a normal appendix within the hernial sac is estimated to be approximately one percent [2]. Acute appendicitis in the inguinal hernia is an even less common event, which accounts for 0.1% of all cases of acute appendicitis3. The preoperative diagnosis of Amyand hernia is rare, and most cases, carried out during the emergency surgical intervention [3,4]. We present the case of a patient whose appendix was found adherent to the hernial sac during an inguinal herniorrhaphy of emergency inguinal hernia incarcerated.

CASE REPORT

A 34-year-old male, a production line assistant from São Paulo, SP, presented to the general surgery clinic with the complaint of a right inguinal bulge for the last two years, and a 6-month history of local pain on exertion with worsening of pain in last 12 hours. He denied a history of chronic cough and constipation. He also denied having any symptoms of benign prostatic hyperplasia. Initial tests showed leukocytosis and the ultrasonography of inguinal region (Figure 1 and 2) showed the presence of inguinal hernia with the presence of the appendix vermiformis within the hernia sac.

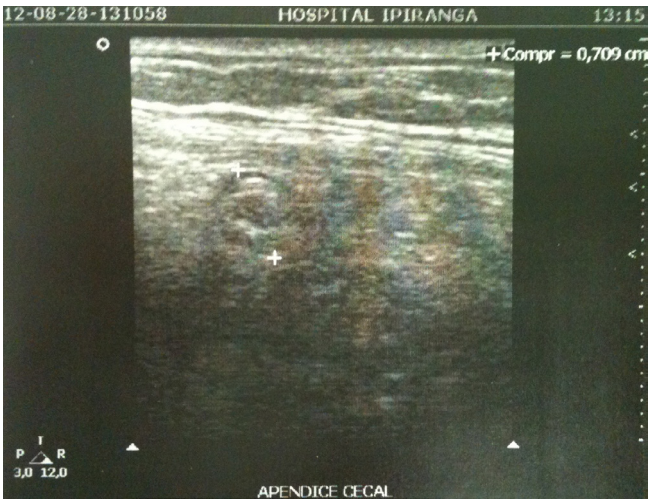

Figure 1: ultrasonography of the inguinal region (transverse) showing cecal appendix in the hernia sac.

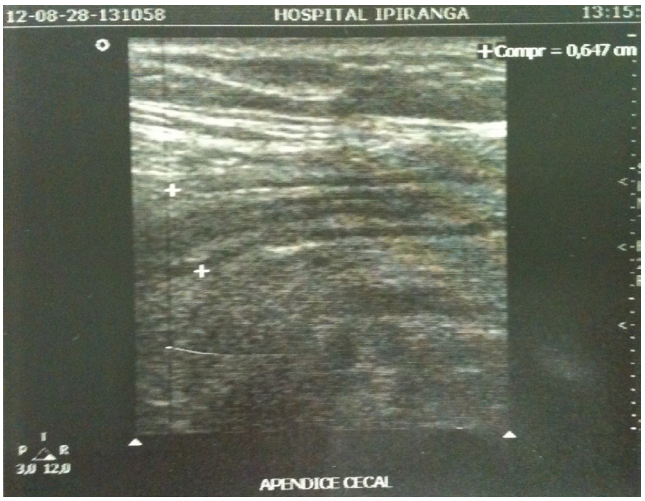

Figure 2: ultrasonography of the inguinal region (longitudinal) showing cecal appendix in the hernia sac.

Physical examination showed an inguinal bulge to the right-side during Valsalva's maneuver, and the cough test revealed an indirect hernia. After an inguinal herniotomy for herniorrhaphy, during the dissection and opening of the hernial sac protruding through the deep inguinal ring, the vermiform appendix was found inside the sac (Figure 3 and 4), adhering to it.

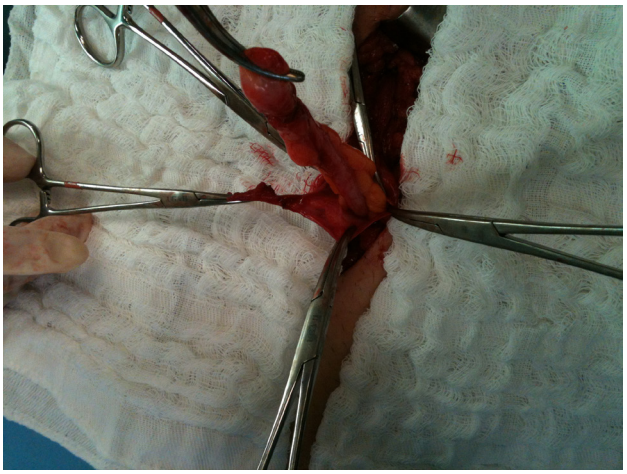

Figure 3: Open hernial sac with the appendix inside.

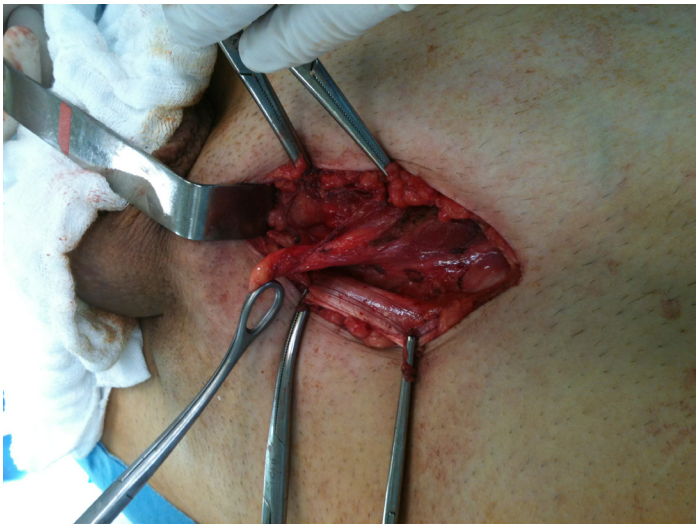

Figure 4: Intraherniary cecal appendix.

The closure of the hernial sac was performed following reduction of the appendix into the abdominal cavity. Barker's technique was used, and herniorrhaphy was performed by the Lichtenstein repair technique (Figure 5). The patient presented satisfactory clinical evolution and was discharged on the five postoperative day. Currently on outpatient follow-up, the patient has no complaints or complications.

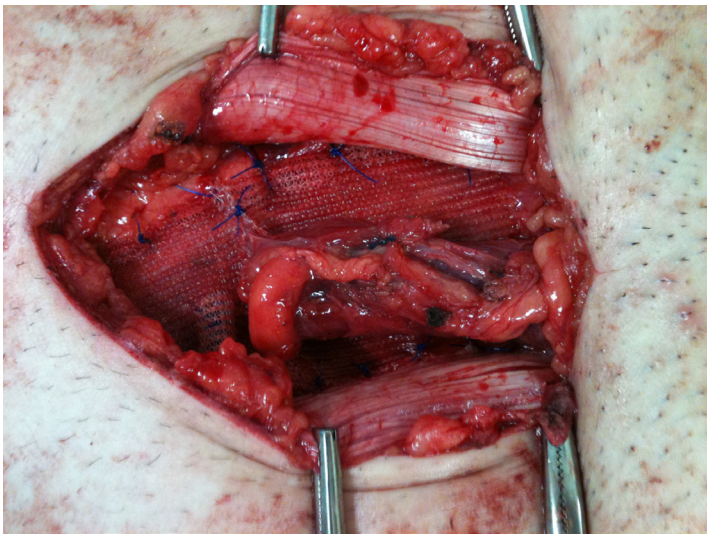

Figure 5: outcome after inguinal repair by Lichtenstein technique with monofilament polypropylene mesh.

DISCUSSION

A hernia is a protrusion of a viscus or part of a viscus through the walls of its containing cavity. It is commonly occurred in the inguinal region, where the hernial sac may contain the omentum or small bowel. However, certain unusual contents may be encountered such as the bladder, a Meckel's diverticulum (Littre's hernia), or a portion of the circumference of the intestine (Richter's hernia). Amyand's hernia remains relatively unknown despite having been first reported nearly 170 years ago [5,6].

The presence of the vermiform appendix (without complications) inside a hernial sac is a rare event. The literature reports that the incidence is around one percent2. More rare and exceptional is the occurrence of a complicated appendix with acute appendicitis within the hernial sac [7]. In the literature, it is reported with an incidence between 0.13% and 0.1% 3-5.

Cases of acute appendicitis within the hernial sac have been described in patients with ages ranging from 3 weeks to 88 years. The diagnosis of this affection is always made intraoperatively [8,9].

In cases complicated with acute appendicitis, the patient presents with acute abdomen and differential diagnosis is an incarcerated and/or strangulated hernia3.

When a normal appendix is found, appendectomy is not recommended, only reduction of the viscera and treatment of the hernial sac as in the case described herein. If acute appendicitis is present, on the other hand, the literature advises appendectomy through a herniotomy and, in the absence of intracavitary contamination, the repair of the hernia defect should be undertaken 2-5 at the same time.

CONCLUSION

In conclusion, a hernia surgeon may encounter unexpected intraoperative findings, such as an Amyand's hernia. The decision as to whether one should perform a simultaneous appendectomy and hernia repair is multifactorial. It is important to be aware of all clinical settings and an appropriate and individualized approach should be applied.

COMPETING INTERESTS

The authors declare that they have no competing interests.

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