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amyand's hernia: a case report

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Abstract

Amyand's hernia corresponds to the presence of the appendix in an inguinal hernial sac, a rare entity. Diagnosis is usually made during surgery. Treatment is increasingly standardized and depends on the condition of the appendix. We report the case of a 34-year-old patient who underwent emergency surgery for a strangulated inguinal hernia, where the hernial sac contained a pudgy, swollen appendix. The operation involved appendectomy and hernia repair using the Bassini technique. The management of this hernia raised two issues: whether or not to perform an appendectomy, and whether to use a plate when repairing the hernia.

Keywords: amyand, hernia, inguinal, appendicitis.

Introduction:

Inguinal Amyand's hernia is a rare condition characterized by incarceration of the vermiform appendix in an inguinal hernial sac. Clinically, it appears similar to an incarcerated hernia, making it difficult to diagnose. The pathophysiology of this rare condition remains poorly understood. The vermiform appendix may remain in the hernia sac without causing symptoms throughout the patient's life. We present here a case in which an Amyand's hernia was diagnosed at the time of surgery. The aim of our study is to evaluate the prevalence and clinical characteristics of patients undergoing emergency surgery for Amyand's hernia.

Observation:

A 34-year-old man with no particular pathological history presented with a painless right inguinal tumefaction that was reducible and impulsive with coughing and had been evolving for 1 year, becoming complicated over the past 2 days.

On physical examination, his abdomen was soft. Inguinal examination revealed a right hernia, painful, irreducible, non-impulsive to coughing, with no inflammatory signs opposite. The diagnosis of a strangulated right inguinal hernia was accepted clinically, without any paraclinical examinations. The indication for emergency surgery was given, with general anaesthesia. Repair of the right ingui-

nal hernia was approached via a 5 cm right oblique incision parallel to the inguinal ligament.

Intraoperative exploration revealed an inguinal hernia sac with a thickened, infiltrated wall, containing the appendix, which was pudgy, swollen and inflamed with a healthy base.

A retrograde appendectomy was performed, followed by Bassini hernia repair by lowering the conjoined tendon over the crural arch using separate X-stitches with non-absorbable suture. Anatomopathological examination showed acute suppurative endo-appendicitis. The immediate postoperative course was favorable. The bursae were not swollen, and the patient was discharged the following day. He was seen again one month later with no complications and no recurrence of the hernia.

Figure 1: peroperative exploration

Discussion:

Protrusion of the vermiform appendix into an inguinal hernial sac is known as Amyand's hernia. This rare condition, representing less than 1% of all inguinal hernias, is named after the English surgeon Claudius Amyand, the first surgeon to describe and treat it in 1735 in London, simultaneously performing the first appendectomy[1].

Appendicitis in an Amyand hernia accounts for around 0.1% of all cases of appendicitis. It is therefore an exceptional situation8. The clinical picture of Amyand's hernia resembles that of an incarcerated hernia, making clinical diagnosis difficult[2].

The diagnosis is very often made intraoperatively, as in our case. In a series of 60 Amyand's hernias by Weber, the diagnosis was made preoperatively in just one patient[3]. However, it can be diagnosed preoperatively thanks to advances in medical imaging, notably CT scans, but this remains exceptional as the operative indication for a strangulated groin hernia does not always await imaging results[4]. In Inan's series, three of the eleven published patients underwent abdominopelvic CT scanning. Imaging is justified in the face of diagnostic doubt and in order to rule out other probable diagnoses (adenophlegmon, tumour, femoral artery aneurysm, etc.)[6]. Biological tests inconstantly reveal an inflammatory syndrome, the absence of which, however, does not rule out a local complication of the hernia (appendicitis, appendicular perforation, etc.)[9]. Right groin location is the most common; in a series of 46 cases, Cisgar et al. found a right inguinal location in 81% of cases, as in our patient's case[7].

Amyand's hernia is always managed surgically. Treatment depends on the condition of the appendix and the presence or absence of appendicitis[10]. Conventional treatment of Amyand's hernia includes appendectomy, and reduction of the hernia through the same incision6. In cases of severe inflammation, diffuse peritonitis or cecal incarceration, a median laparotomy should be performed[12].

However, with regard to the treatment of Amyand's hernia, two questions need to be asked: should an appendectomy be performed routinely? and is there an indication for the use of a prosthesis in the repair of Amyand's hernia?[9]

For the first question: when acute appendicitis is present, an appendectomy is usually performed to prevent future complications. However, in cases where the appendix appears normal and healthy, prophylactic appendectomy can be avoided, as opening the digestive tract increases the risk of postoperative infection[12]. Prophylactic (systematic) appendectomy appears to be indicated in immunocompromised patients (transplant recipients on immunosuppressants) and in cases of severe heart disease with an ejection fraction of less than 35%[11].

The use of prostheses is also the subject of debate. The use of prostheses can increase the risk of postoperative infection, particularly when the appendix is infected. The presence of a prosthesis can complicate wound healing and encourage the spread of germs[15]. This warrants careful consideration before using a prosthesis, especially if signs of inflammation or peritonitis are present. As a result, in patients with acute inflammation or appendicitis, surgeons often prefer to avoid the use of a prosthesis and opt for a non-mesh repair[6-7].In cases where repair is performed after uncomplicated appendicitis and in the absence of infection, the use of a prosthesis may be considered to reinforce the abdominal wall and reduce the risk of hernia recurrence[1 -7].

It is for all these controversies that LOSANOFF and BASSON have proposed a classification system enabling the staging and appropriate treatment of each case according to intra-operative findings 13

Type I (non-inflamed appendix):

Treatment consists of standard inguinal hernia repair with hernioplasty (repair of the hernia), without the need for appendectomy, as the appendix is intact and healthy.

Type II (Inflamed appendix without perforation):

If the appendix is inflamed but not perforated, the appendix must be removed (appendectomy) to prevent it from becoming more severe and causing complications, while repairing the inguinal hernia.

Type III (Perforated appendix):

Perforation of the appendix in the inguinal hernia requires more urgent intervention. In addition to appendectomy, treatment of peritonitis (if present) is required, which may include antibiotics and drainage of the peritoneal cavity.

Type IV (Gangrenous appendix):

A gangrenous appendix is a surgical emergency. Appendectomy should be performed immediately, and management of peritonitis considered if gangrene has caused extensive infection.

The Losanoff and Basson classification was modified by Singal et al[14]. They added a fifth type grouping incisional hernias containing the vermiform appendix. Type 5 is divided into three subtypes:

- Type 5a- Normal appendix in an incisional hernia. Treatment consists of cure of the hernia, including prosthesis),
- Type 5b- Acute appendicitis in an incisional hernia without peritonitis. Treatment consists

of appendectomy, and hernia repair without prosthesis[6].

- Type 5c- Acute appendicitis in an incisional hernia with peritonitis: treatment is the same as in Losanoff and Basson type[4].

The laparoscopic approach is preferred to laparotomy for the treatment of incarcerated or strangulated hernias. The various reasons are that laparoscopy allows better exploration of the abdominal cavity. It also provides a better estimate of the contents of the hernia sac and the viability of the intestinal loops than laparotomy through the hernia sac, thus avoiding the need for bowel resections[16].

Conclusion:

Amyand's hernia is a rare condition. If treated correctly, it does not increase morbidity or mortality. Prophylactic appendectomy may be more justified in younger patients, who are at higher risk of appendicitis in their lifetime than older patients. Questions remain as to the true prevalence of this disease, its pathophysiology, clinical manifestations and treatment. Further research is needed to better understand it, but this is complicated by its rarity.

Conflicts of interest

the authors declare having no conflicts of interest for this article

Ethical approval

I declare on my honor that the ethical approval has been exempted by my establishment

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