

A Recurrent Amyand Hernia: Clinical and Therapeutic Particularities with Review of the Literature

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Abstract

Incidental discovery of an Amyand's hernia during surgery, in a patient admitted to the emergency room for groin pain probably correlated with a strangulated inguinal hernia. The purpose of the present is to make a contribution to the understanding of this disease, with regard to its diagnosis and in particular the optimization of its surgical treatment. Although serious complications have been described, Amyand's hernia usually has a good prognosis. Nevertheless, practitioners must master the clinical and surgical particularities of Amyand's hernia in order to ensure optimal and adequate treatment of the hernia, while avoiding any recurrence. Questions remain as to its pathophysiology, clinical particularity and treatment. More research and evidence is needed, which will be difficult to achieve due to the rarity of Amyand's hernia.

Keywords: inguinal hernia: appendicitis: Bassini: strangulated hernia: Amyand hernia

Introduction

Claudius Amyand hernia (HCA) was first described by Claudius Amyand (military surgeon) on December 6, 1735. It is defined by the incarceration of the vermiform appendix, in a hernial orifice in the region of the groin, most often the right inguinal ostium which is in question [1-2]. Its incidence in the literature is highly variable (0.2-1.7%) and the presence of associated acute appendicitis is extremely rare (0.07-0.13%) [3-4].

The positive diagnosis is never purely clinical, requiring routine imaging, or incidental discovery intraoperatively. It represents a diagnostic and therapeutic problem, with a potentially high morbidity and mortality due to the resulting stercoral peritonitis, which results in a higher cost of care and a longer hospital stay [5]. Our reported case will focus on a patient previously operated on for right inguinal hernia, in whom an Amyand hernia was detected intraoperatively.

Presentation of the case

Patient Information: A 51-year-old man, followed for type 1 diabetes complicated by nephropathy. At the age of 14, he had suffered a simple herniorrhaphy in front

of a persistence of the peritoneal-vaginal canal (missing documentation).

General and functional signs

On admission to the emergency department, he had an accelerated, subfebrile pulse and he complained of intense pain of sudden onset without irradiation evolving for < 5 hours in the region of the right groin site of old kelotomy, all associated with nausea without altering digestive transit.

Physical signs

We detect an accentuated sensitivity on deep palpation, no arching or expulsive mass on coughing.

Circumstances

Table suggestive of a recurrence of strangulated hernia (possibly by lateral pinching). Race against the clock (acute pain < 5h).

Therapeutic decision

Patient admitted to the emergency room, with a correct income hemostasis assessment (prothrombin and platelet levels correct).

Under spinal anesthesia, in the supine position, a laparotomy is performed using the same kelotomy site. The opening of the hernia sac exposes an open sky an inflamed appendix (**figure A**) drowned in serous fluid

(taken and aspirated), then an anterograde appendectomy is performed which ends with a cure of the hernia according to the Bassini technique.



Figure 1: Appendicitis Protruding Through the Deep Orifice of The Right Inguinal Canal: Recurrence of Hernia.

The immediate postoperative follow-up and the medium and long-term follow-up during the consultation days (5 days, 15 days and 36 days) were unremarkable, with a return to normal daily life and a return to work from the 30th day.

Discussion

The rarity of cases makes it difficult to easily estimate its true prevalence. Looking at some of the larger series described in the literature, it seems that the true prevalence is somewhat lower, between 0.4% and 0.6%, while the prevalence of appendicitis in Amyand's hernia actually seems to be 0.1%. This hypothesis has also been affirmed by other authors. The work carried out by D'Alia et al in 2003 on a sample of 1341 inguinal hernias determined that the incidence of Amyand's hernia was around 0.6%, and is found exclusively in men [7]. Our patient had developed at a young age, an inguinal hernia on a persistence of the peritoneal-vaginal canal, while it was only in his fifties that he developed Amyand's hernia on recurrence of the latter. After reviewing the literature, we are faced with a disease that is three times more likely to be diagnosed in children than in adults, due to the permeability of the vaginal process in the pediatric population [6].

Our patient on admission to the emergency room of the Moulay Ismail Military Hospital complained of pain in the right iliac fossa, without any associated signs. Therefore, it is difficult to distinguish it from an incarcerated or strangulated inguinal hernia [9]. Unlike the typical pain of an inguinal hernia, the pain tends to be cramping and episodic, and its duration can be 24

hours in adults and up to 72 hours in children [8, 10, 11]. The absence of signs or symptoms specific to an Amyand's hernia makes clinical diagnosis difficult. Our patient did not perform either the standard radiology or the ultrasound seen that he showed up urgently. While in the series by Sharma et al, the 18 cases studied all benefited from a standing abdominal X-ray, thus revealing 03 cases of intestinal obstruction [8]. Since the year 2000, some cases have been diagnosed before the operation [12,13] thanks to abdominal computed tomography. In principle, CT allows direct visualization of the appendix inside the inguinal canal. The proximity of the cecum to a hernia is an indirect sign of Amyand's hernia [17,18, 19]. Laparoscopic surgery has several advantages over open surgery, including reduced postoperative pain, increased reduced hospital stay and faster return to daily activities [23,22,21,20]. In addition, laparoscopy reduces surgical manipulations to obtain visualization of the entire appendix and its base, thus avoiding enlarging the hernia defect or distend the neck of the hernial sac, thus reducing the possibility of recurrence of the hernia by weakening the anatomical structures [8,20]. Tycast et al instrumentalized laparoscopic surgery not only as a therapeutic, but also as a diagnostic tool for the management of a 12-year-old child with an Amyand's hernia with a appendicitis. Indeed, laparoscopic surgery has made it possible to visualize all abdomen, decreased postoperative pain and faster recovery fast [24].

In our patient, we limited ourselves to the elective revision of the old Kelotomy, through which we perform the extraction of the catarrhal appendix then

its resection follows and we end with the cure by raphie according to Bassini's process.

In addition, there were various complications of Amyand's hernia, observed with:

- Lyass et al, who discovered an abdominal abscess secondary to a perforated appendix in an inguinal hernia [15].
- Kueper et al who treated an Amyand hernia containing an appendix perforated and complicated by a periappendicular abscess [25].
- Serrano and Ackerman who reported a right inguinal hernia incarcerated containing a perforated appendix with a right testicle and a inflamed spermatic cord. The cords had to be removed [16].
- Milburn JA et al who reported that Amyand's hernia with perforated appendix may also present with testicular ischemia in neonates [14].

In our patient the evolution was favorable and without antibiotic coverage, and then the controls were simple without particularities.

Conclusion

Amyand's hernia is an extremely rare and atypical disease, the prevalence of which is estimated at 1% of all inguinal hernias, while appendicitis in Amyand's hernia accounts for 0.1% of all appendicitis cases [2]. Early symptoms include inguinal tenderness and swelling that can be misdiagnosed as a strangulated hernia, making diagnosis clinically tricky. Preoperative diagnosis plays an important role in planning the treatment. Computed tomography and ultrasound are particularly useful in order to make an accurate diagnosis. Therapeutically, the treatment is essentially surgical, but depends on the condition of the appendix, the characteristics of the hernia, as well as the the general condition of the patients to be operated on.

Although serious complications have been described, Amyand's hernia usually has a good prognosis. Nevertheless, practitioners must master the clinical and surgical particularities of Amyand's hernia in order to guarantee appropriate treatment of the hernia without complications, while avoiding the risk of recurrence. [26]. Finally, it seems, according to analysis of the data of the examined literature that there is no additional advantage to a prophylactic appendectomy and that the surgical intervention is recommended only in case of inflammation, perforation or gangrene of the appendix.

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