

Case Report
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An Amyand's Hernia with Recurrence: Clinical and Therapeutic Particularities with Literature Review

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SUMMARY

Fortuitous discovery of an Amyand hernia during surgery in a patient admitted to the emergency room for groin pain likely related to a strangulated inguinal hernia. The aim of this study is to contribute to the understanding of this disease, particularly in terms of diagnosis and optimization of surgical management. Although serious complications have been described, Amyand hernia generally has a good prognosis. However, practitioners must master the clinical and surgical peculiarities of Amyand hernia in order to ensure optimal and adequate treatment of the hernia while avoiding recurrence. Questions remain regarding its pathophysiology, clinical peculiarity, and treatment. More research and evidence are needed, which will be difficult to achieve due to the rarity of Amyand hernia.

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Introduction

Claudius Amyand hernia (CAH) was first described by military surgeon Claudius Amyand on December 6, 1735. It is defined by the incarceration of the vermiform appendix in a hernial orifice in the groin area, most commonly the right inguinal ostium 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].

Positive diagnosis is never purely clinical and routinely requires imaging or incidental discovery during surgery. It represents a diagnostic and therapeutic problem, with potentially high morbidity and mortality due to resulting stercoral peritonitis, which leads to higher costs and longer hospital stays. [5].

Our reported case will focus on a patient previously operated on for a right inguinal hernia, in whom an Amyand hernia was detected during surgery.

Case presentation
Patient information

A 51-year-old man with type 1 diabetes complicated by nephropathy; At the age of 14, he underwent simple herniorrhaphy due to persistent peritoneovaginal canal (missing documentation)

General and functional signs

Upon admission to the emergency department, he had an accelerated pulse, was subfebrile, and complained of intense, suddenly onset pain without irradiation, which had been evolving

for < 5h in the area of the old right groin incision, associated with nausea without alteration of digestive transit.

Physical signs

Increased sensitivity on deep palpation, no bulging or expulsive mass on coughing.

Circumstances

Symptoms suggestive of strangulated hernia recurrence (possibly due to lateral pinching). Race against time (acute pain <5h)

Therapeutic decision

The patient was admitted to the emergency room, with a correct hemostasis assessment (correct prothrombin and platelet levels).

Under spinal anesthesia, in a dorsal decubitus position, a laparotomy was performed at the same site as the old incision. The opening of the hernia sac exposed an inflamed appendix drowned in serous fluid (taken and aspirated), followed by an antegrade appendectomy and a Bassini technique hernia repair (Figure A).



Figure A: Recurrence of Hernia with Appendicitis Protruding Through the Deep Orifice of The Right Inguinal Canal

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

Discussion

The rarity of cases makes it difficult to accurately estimate the true prevalence of Amyand's hernia. By studying some of the largest 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 is actually 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 was found exclusively in men [6].

Our patient developed an inguinal hernia at a young age due to persistence of the processus vaginalis, and it was only in his fifties that he developed Amyand's hernia as a recurrence of the former. After reviewing the literature, we face a disease that is three times more likely to be diagnosed in children than in adults due to the patency of the processus vaginalis in the pediatric population [7].

At his admission to the emergency department of the Moulay Ismail Military Hospital, our patient 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 [8]. Unlike the typical pain of an inguinal hernia, the pain tends to be crampy and episodic, and its duration can be 24 hours in adults and up to 72 hours in children [8-11]. The absence of specific signs or symptoms of Amyand's hernia makes the clinical diagnosis difficult.

Our patient did not undergo either standard radiology or ultrasound since he presented in an emergency setting. However, in Sharma et al's series, all 18 cases studied had a standing abdominal radiography, revealing 3 cases of intestinal obstruction [8].

Since 2000, some cases have been diagnosed before surgery using 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 [12-19].

Laparoscopic surgery has several advantages over open surgery, including a reduction in postoperative pain, a reduction in hospital stay, and a faster return to daily activities [20-23]. In addition, laparoscopy reduces surgical manipulations to obtain visualization of the entire appendix and its base, thereby avoiding enlarging the hernia defect or distending the hernia sac neck, reducing the possibility of hernia recurrence by weakening the anatomical structures [8,20].

Tycast et al utilized laparoscopic surgery not only as a therapeutic but also as a diagnostic tool for the management of a 12-year-old child with Amyand's hernia with appendicitis. Laparoscopic surgery allowed visualization of the entire abdomen, a decrease in postoperative pain, and a faster recovery [24].

In our patient, we limited ourselves to the elective resumption of the old Kélotomie, through which we performed the extraction of the catarrhal appendix, followed by its resection, and we finished with the Bassini procedure for cure by raphy.

In our patient, the evolution was favorable without antibiotic coverage, and the follow-up controls were simple without any particularities. On the other hand, various complications of Amyand's hernia were observed in:

- 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 a perforated appendix complicated by a peri-appendiceal abscess [25].
- Serrano and Ackerman, who reported a right incarcerated inguinal hernia containing a perforated appendix with an inflamed right testicle and spermatic cord. The cords had to be removed [16].
- Milburn JA et al, who reported that Amyand hernia with perforated appendix can also present with testicular ischemia in newborns [14].

Conclusion

Amyand hernia is an extremely rare and atypical disease, with a prevalence estimated at 1% of all inguinal hernias, while appendicitis in Amyand hernia represents 0.1% of all cases of appendicitis. [2].

The first symptoms include inguinal tenderness and swelling, which can be mistakenly diagnosed as a strangulated hernia, making clinical diagnosis difficult. Preoperative diagnosis plays an important role in treatment planning. Computed tomography and ultrasound are particularly useful in making an accurate diagnosis.

Therapeutically, treatment is primarily surgical but depends on the condition of the appendix, the characteristics of the hernia, as well as the general condition of the patients to be operated on. Although serious complications have been described, Amyand hernia generally has a good prognosis. Nevertheless, practitioners must master the clinical and surgical peculiarities of Amyand hernia in order to ensure appropriate hernia treatment without complications while avoiding the risk of recurrence [26].

Finally, according to the analysis of the literature reviewed, there seems to be no additional benefit to prophylactic appendectomy, and surgical intervention is recommended only in cases of inflammation, perforation, or gangrene of the appendix.

Consent

As per international standard or university standard, patients written consent has been collected and preserved by the author(s).

Ethical Approval

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

Competing Interests

Authors have declared that no competing interests exist.

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