

An Incidental Discovery of Amyand's Hernia in 2 Years Old Boy

Rouijel Badr*, Yacine Zouirech, Loubna Aqqaoui, Houda Oubejja, Hicham Zerhouni, Mounir Erraji and Fouad Ettaybi

Pediatric Surgical Emergency Department- Children's Hospital of Rabat

Faculty of Medicine and Pharmacy of Rabat- Mohamed V University of Rabat, Morocco

***Corresponding author:** Badr Rouijel, Department Pediatric Surgical Emergency, Faculty of Medicine and Pharmacy of Rabat, Children's Hospital of Rabat, Morocco

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Summary

Introduction: Amyand's Hernia is a rare condition occurring in approximately 1% of all hernias, with complications such as acute appendicitis or perforated appendicitis being even rarer, around 0.1%. Its pre-operative diagnosis is notably challenging, often being incidentally discovered.

Case Presentation: We report a case of a two-year-old boy patient who presented at the pediatric surgical emergency department with an incarcerated right inguinal hernia without signs of ischemic complications. Following admission, hernioplasty was performed, revealing an incidental Amyand's hernia managed without appendectomy, and no complications were noticed.

Conclusion: There is a rarity of this disease and few cases have been reported in the literature. Such cases need to be reported to keep the surgeons aware of this condition and its different manifestations.

Keywords: Amyand's hernia, hernioplasty, appendectomy

Introduction

The presence of the appendix, whether normal or inflamed, inside the inguinal hernial sac is termed Amyand's hernia (AH) [1]. AH is a rare condition, accounting for only 1% of all inguinal hernia cases [1]. However, the occurrence of acute appendicitis within an inguinal hernial sac is even rarer, with an incidence of 0.08% [1-4]. This condition is more frequently observed in male patients [4] and shows a bimodal age distribution, affecting neonates and individuals over 70 years old [2-4]. In children, AH is three times more prevalent compared to adults, possibly due to the persistence of patent processes vaginalis [2,4].

Case Presentation

We report a case of a 2-year-old boy presented to pediatric surgical emergency department complaining of painless right inguinal swelling. There were no associated symptoms of nausea or vomiting. Upon physical examination, a right-sided reducible inguinal hernia was diagnosed. There were no signs of abdominal distension, and laboratory parameters were within normal ranges. Due to the clear clinical diagnosis, ultrasound examination was not pursued.

Surgical exploration was performed under general anesthesia. The inguinal canal was accessed through a lower transverse abdominal skin crease, and herniotomy was performed. How-

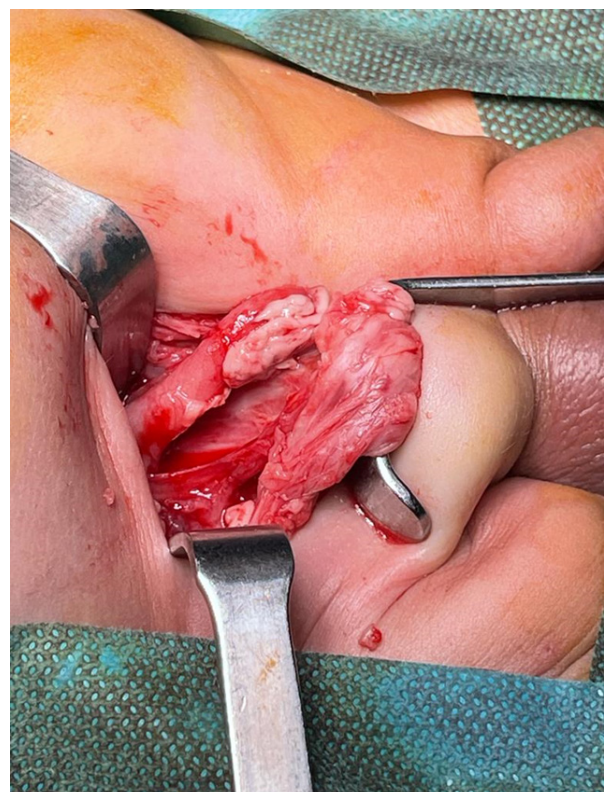


Figure 1: Image showing appendix as a content of hernia sac.

ever, upon opening the hernial sac, the appendix was incidentally identified as its contents (**Figure 1**). The hernial sac was securely ligated with Vicryl 3-0 RB and then divided. The external aponeurosis was closed, followed by subcuticular skin closure using Vicryl 3-0 RB.

The postoperative period was uneventful, and the patient was discharged on the second postoperative day. On follow-up, the patient was in good condition, and the surgical wound showed healthy healing.

Discussion

AH was discovered in 1735 by Claudius Amyand while operating upon an 11-year-old boy with a perforated appendix in an inguinal hernial sac with faecal fistula in the groin [1,3-5]. Since then, the presence of the vermiform appendix in a hernia sac has been deemed an Amyand's Hernia (AH).

The pathophysiology of AH and its relationship with acute appendicitis is not fully known [6,7]. Some reports explained the presence of a fibrous connection between the appendix and testis with patent processus vaginalis as a possible congenital predisposition for AH [4].

Diagnosing AH can be very challenging due to the varied symptoms patients may exhibit, depending on the condition of the appendix—whether normal, incarcerated, or perforated. Painful inguinal or inguinoscrotal swelling is the most common presenting symptom, often suggestive of an incarcerated hernia based on history and examination [9]. In some cases, patients may present with complications such as acute inflammation leading to abscess formation, perforation, epididymitis, orchitis, or necrotizing fasciitis [8,9].

There's ongoing debate regarding the management of the appendix in Amyand's hernia cases. Most literature suggests that the treatment approach depends on the condition of the appendix within the hernial sac. Losanoff and Basson in 2007 described a classification system regarding AH type and its management in adults [10], but there is still a lack of consensus about dealing with a normal-looking appendix in AH in the paediatric age group [11].

According to Losanoff and Basson, AH are categorized into four subtypes: (i) normal appendix within the inguinal hernia, (ii) hernia with inflamed appendicitis, (iii) hernia with perforation of the appendix and (iv) complications including abscess or malignancy [10]. In subtype 1, Losanoff and Basson suggest AH may be managed with reduction or appendectomy. Subtypes 2-4, all with abnormalities of the appendix, require appendectomy and hernia repair [10]. However, controversies persist regarding AH when the appendix appears normal [11]. Advocates against appendectomy on a normal-looking appendix argue to avoid the risk of infection in an otherwise clean procedure. They note that appendectomy requires widening of the deep ring, potentially weakening tissues and increasing the

risk of recurrence. Additionally, they highlight the potential future need for the appendix in procedures like urinary diversion, especially in pediatric patients [1,4]. Conversely, proponents of appendectomy believe that manipulation of the appendix during surgery may compromise its blood supply, leading to secondary appendicitis [12].

In our case, considering the normal appearance of the appendix and the young age of the patient, we opted for a conservative approach.

Conclusion

Due to the rarity of AH and its variable presentation, diagnosis is often incidental. The surgical approach depends on the surgeon's preference, whether to perform appendectomy along with herniotomy or herniotomy alone in children.

Conflict of Interest: All the authors declare that they do not have any conflict of interest.

Consent of Publication: Consent from parents has been taken.

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