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Left Amyand's hernia: An unexpected finding during inguinal hernia surgery



Ahmed M. Al Maksoud*, Ahmed Salah Ahmed

Department of Surgery, Sligo regional hospital, Sligo, Ireland

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ABSTRACT

INTRODUCTION: Amyand's hernia is a rare finding of the appendix inside an inguinal hernia sac with classically estimated incidence of 1%. Most cases are found intra-operatively during right-sided inguinal hernia repair.

PRESENTATION OF CASE: We are reporting a very rare case of left-sided Amyand's hernia. An 81 year-old man with long standing left inguinal hernia was referred to our surgical assessment unit with tender irreducible left inguinal hernia. He was vitally stable with no clinical signs of intestinal obstruction. A diagnosis of irreducible left inguinal hernia without obstruction was made. Exploration of the hernia sac revealed the presence of non-inflamed appendix, caecum and terminal ileum. The contents were reduced and a mesh repair was performed with satisfactory outcome.

DISCUSSION: The surgical management of Amyand's hernia involves appendectomy of inflamed appendix through the inguinal incision together with hernia repair. Prophylactic appendectomy is not recommended by most authors except in young patients.

CONCLUSION: There are less than 20 cases reported in the literature describing left-sided Amyand's hernia. Awareness of such very unusual condition may help surgeons to be prepared for appropriate management of a very usual procedure as inguinal hernia repair.

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1. Introduction

The name Amyand's hernia is used to describe the presence of the appendix inside an inguinal hernia sac, irrespective of the condition of the appendix [1]. Most cases are found intra-operatively during right-sided inguinal hernia repair [2]. We are reporting a very rare case of left-sided Amyand's hernia.

2. Case presentation

An 81 year-old man with long standing left-sided inguinal hernia was referred to the surgical assessment unit with acute onset of tender irreducible left inguinal hernia associated with a few episodes of vomiting. He denied any abdominal pain or altered bowel habits. He was reviewed in the surgical clinic and put on the waiting list for elective hernia repair. In his past medical history he had ischaemic heart disease, atrial fibrillation and transient ischaemic attacks.

On clinical evaluation he was vitally stable. Abdominal examination was unremarkable with no signs of obstruction. On local examination, there was a tender large irreducible left inguino-scrotal lump reaching to the base of the scrotum. Both testes were palpable separately in the scrotum. Right sided inguino-scrotal region was unremarkable apart from mild vaginal hydrocele. Routine bloods were done on admission and all results were within normal ranges. Plain X-ray abdomen did not suggest significant obstruction.

At this stage a diagnosis of irreducible left inguinal hernia with no obstruction was made. The patient was admitted for inguinal hernia repair and his Aspirin and Ticagrelor were put on hold.

On the day of surgery the classic incision for left inguinal hernia was made. An indirect inguinal hernia was identified and adhesions were released. The appendix, caecum and terminal ileum were found on opening the hernia sac with no clinical evidence of inflammation. The contents were reduced back inside the peritoneal cavity. A mesh hernia repair was performed as usual.

The patient had an uneventful recovery and was discharged home on the second post-operative day. During his follow-up in the out-patient clinic six weeks later, he had no complications or evidence of recurrence. He was discharged from the clinic.

* Corresponding author at: Surgical north level 6, Sligo regional hospital, the Mall, Sligo, Co.Sligo, Ireland.

E-mail addresses: ahmed_azez293@yahoo.com (A.M. Al Maksoud), fatimabitahmed@hotmail.com (A.S. Ahmed).

Table 1
Losanoff and Basson's classification of Amyand's hernia [14].

Classification	Description	Surgical management
Type 1	Normal appendix within an inguinal hernia	Hernia reduction, mesh repair, appendectomy in young patients
Type 2	Acute appendicitis within an inguinal hernia, no abdominal sepsis	Appendectomy through hernia, primary repair of hernia, no mesh
Type 3	Acute appendicitis within an inguinal hernia, abdominal wall or peritoneal sepsis	Laparotomy, appendectomy, primary repair of hernia, no mesh
Type 4	Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology	Manage as types 1–3 hernia, investigate or treat secondary pathology as appropriate

3. Discussion

First described by Claudius Amyand (1660–1740), a French born English surgeon, who successfully performed the first reported appendectomy for inflamed appendix encountered during herniotomy on an 11 year-old boy in 1735 at St George's hospital. The case was published in Philosophical Transactions of the Royal Society of London [1].

The incidence of Amyand's hernia is between 0.4% and 0.6%, which is smaller than the classical incidence of 1% which was based on older research [3,4]. The association of appendicitis is even rarer and reported to be 0.1% [3]. In paediatrics, the incidence is about 3 times more common [5].

The majority of cases are right-sided, which is understandable in view of the normal anatomy of the appendix. Additionally, right inguinal hernias are more common than the left ones [2]. Left-sided Amyand's hernias are very rare. According to Mewa Kinoo (2013) a literature review revealed only 15 reported cases of left-sided Amyand's hernia, including his own case [6].

The suggested explanations for left-sided Amyand's hernia are situs inversus, malrotation, mobile caecum and excessively long appendix [6]. As in our case, the only clinically proved association was a mobile caecum [3].

The clinical picture of Amyand's hernia is that of inguinal hernia and depends mainly on the inflammatory condition of the appendix [3]. According to Sharma et al., up to 83% of cases present with painful inguino-scrotal mass [7]. The majority of cases are misdiagnosed pre-operatively as incarcerated or strangulated inguinal hernia. Amyand's hernia may remain asymptomatic during life as proved by incidental diagnosis in a cadaveric specimen [8].

In view of this clinical presentation, almost all cases of Amyand's hernias are diagnosed intra-operatively. Pre-operative diagnosis can be made using ultrasound and CT scan [9,10]. However, these investigations are not routinely done after clinical diagnosis of strangulated inguinal hernia.

Only a few cases have been reported where diagnosis was made pre-operatively [11,12]. Amyand's hernia has also been diagnosed as incidental finding in barium enema [13,6].

Losanoff and Basson proposed a classification scheme to determine the surgical management of Amyand's hernia, depending on the status of the appendix (Table 1) [14,15].

Type 1 Amyand's hernia contains normal appendix, managed by mesh hernia repair without appendectomy unless the patient is young. In types 2 to 4 hernias, appendectomy is routinely performed [14,15]. In addition to primary hernia repair, type 3 requires a laparotomy for abdominal irrigation and type 4 indicates further investigations of associated pathology [16].

Johari et al. suggested routine appendectomy for left-side hernias regardless of the condition of the appendix, as future appendicitis may cause a diagnostic dilemma due to the unusual position of the appendix [17]. Laparoscopic repair of Amyand's hernia without mesh was reported by a few authors [18,19].

The use of mesh should be avoided in the presence of appendicitis or contaminated field due to higher risk of mesh infection and hernia recurrence [20].

4. Conclusion

Amyand's hernia is a rare occurrence in inguinal hernia and even rarer on the left side. Our patient met the criteria for Losanoff's type 1 Amyand's hernia with no features suggesting appendicitis or obstruction. The diagnosis was made intra-operatively and managed by simple reduction and mesh repair of the inguinal hernia. Awareness of such an unusual condition may help surgeons to be prepared for the appropriate management of a common procedure such as inguinal hernia repair.

Conflict of interest statement

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Consents

Written informed consent was obtained from the patient prior to the writing of the case report.

Ethical approval

No approval needed.

Research registry

N/A.

Author contribution

Al Maksoud was involved in data collection and writing the manuscript draft. A .Ahmed was involved in the review of the manuscript. Both authors were involved in the final revision and approval of the final manuscript for publication.

Gaurantor

Mr. Ahmed Al Maksoud will act as the guarantor for this article.

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