

Case Report

Amyand-type congenital inguinoscrotal hernia in a 70-year-old male: a diagnostic pitfall

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ABSTRACT

Amyand hernia, defined as the presence of the vermiform appendix within an inguinal hernial sac, is a rare clinical entity and is most commonly described in pediatric and young adult populations. Presentation in elderly patients is exceptional and often represents a long-standing congenital indirect inguinoscrotal hernia. We report a case of a 70-year-old male presenting with a left-sided irreducible inguinoscrotal swelling, diagnosed as chronic hydrocele for long. Elective surgical exploration revealed a large, thickened hernial sac with dense adhesions, a tight internal ring, and the appendix with omentum as contents. The internal ring was partially incised to facilitate reduction, followed by Lichtenstein's open mesh hernioplasty. The appendix was non-inflamed, hence preserved. This case highlights a rare presentation of Amyand-type congenital inguinoscrotal hernia in old age and underscores the diagnostic challenges associated with long-standing hernias in elderly patients.

Keywords: Amyand hernia, Congenital inguinoscrotal hernia, Elderly, Irreducible hernia, Hydrocele, Mesh hernioplasty

INTRODUCTION

Amyand hernia is a rare variant of inguinal hernia characterized by the presence of the vermiform appendix within the hernia sac and accounts for approximately 1% of all inguinal hernias.¹ Most reported cases occur in children or young adults, reflecting a congenital etiology related to persistence of the processus vaginalis.² Presentation in elderly patients is uncommon and typically represents a long-standing congenital indirect inguinoscrotal hernia that has remained undiagnosed for decades. Chronic herniation leads to sac thickening, dense adhesions, irreducibility, and atypical clinical features, often resulting in misdiagnosis as other scrotal pathologies such as chronic hydrocele or pyocele.^{3,4}

CASE REPORT

A 70-year-old male presented with a left-sided inguinoscrotal swelling that had been present since birth

and had progressively increased in size. The patient had previously been diagnosed clinically with chronic hydrocele and had declined surgical intervention. He presented to our centre with complaints of increasing size, discomfort and irreducibility of the swelling.

There was no history of trauma, nausea, vomiting, abdominal distension or symptoms suggestive of intestinal obstruction. On examination, an ovoid swelling, measuring approximately 7×7 cm was noted in the left inguinal region, extending into scrotum. The swelling was minimally reducible even on lying down or manipulation, non-tender with absent cough impulse. Testis was not palpable separately and a gurgling sound was noted on manipulation. Based on clinical findings, a diagnosis of Inguinal hernia was made and elective surgical repair was planned (Figure 1).

An inguinal incision revealed a large, thickened hernia sac with dense adhesions with cord structures. The testis was encountered within the operative field following dissection

(Figure 2). The internal ring was tight, consistent with an indirect inguinoscrotal hernia. On opening the sac, the contents were identified as the vermiform appendix and omentum (Figure 3). The appendix was healthy and non-inflamed.

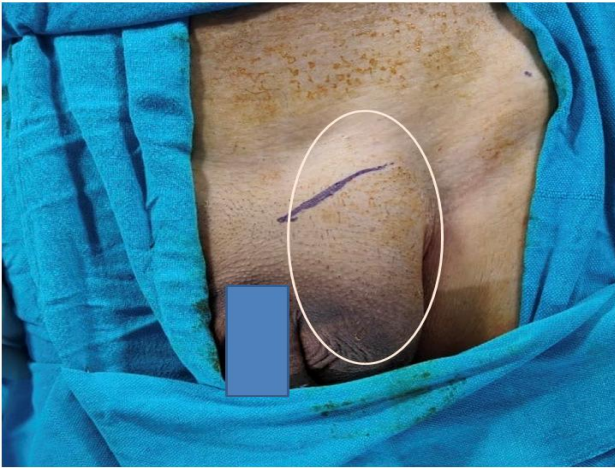


Figure 1: Preoperative clinical photograph showing a left-sided irreducible inguinoscrotal swelling despite manipulation and taxis maneuver.



Figure 2: Intraoperative view showing a large, thickened hernial sac exposed following inguinal incision.

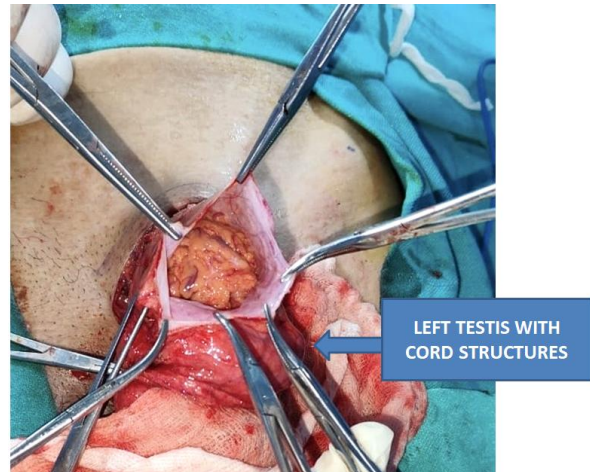


Figure 3: Opened hernial sac demonstrating omentum and vermiform appendix as contents (Amyand hernia), with left spermatic cord structures and testis visible.

Due to the tight internal ring and irreducibility of the contents, the internal ring was partially incised to widen the neck, allowing safe reduction of the appendix and omentum (Figure 4). An appendectomy was not performed. A standard open Lichtenstein mesh hernioplasty was completed. The postoperative period was uneventful, and the patient was discharged in stable condition.



Figure 4: Vermiform appendix and omentum delivered outside the hernial sac.

DISCUSSION

Amyand hernia is a rare variant of inguinal hernia, characterized by the presence of the vermiform appendix within the hernial sac, accounting for approximately 1% of all inguinal hernias.¹ It is predominantly reported in children and young adults, reflecting its congenital origin due to persistence of the processus vaginalis.² Presentation in elderly patients is uncommon and usually represents a congenital indirect inguinoscrotal hernia that has remained untreated for decades.^{3,4}

Long-standing herniation results in progressive pathological changes, including thickening of the hernial sac, fibrosis, dense adhesions, and narrowing of the internal ring, leading to irreducibility and atypical clinical presentation.^{4,5} These chronic changes often obscure classical features of inguinal hernia, such as expansile cough impulse, thereby increasing the likelihood of misdiagnosis. In elderly patients, such hernias frequently mimic chronic hydrocele or pyocele, particularly when scrotal involvement predominates and the testis is not separately palpable.⁵ In the present case, the swelling had been present since birth and was repeatedly diagnosed as hydrocele, highlighting this diagnostic pitfall.

Preoperative diagnosis of Amyand hernia remains difficult. Ultrasonography may be inconclusive in chronic cases, while computed tomography can identify the appendix within the hernia sac but is not routinely indicated in uncomplicated inguinoscrotal swellings.³ Consequently, most cases are diagnosed intraoperatively, emphasizing the need for a high index of suspicion in elderly patients with long-standing irreducible inguinoscrotal swellings.

Surgical management depends on the condition of the appendix. According to the classification proposed by Losanoff et al, in type I Amyand hernia with a normal appendix, reduction of contents followed by mesh hernioplasty is recommended.⁶ Routine appendectomy in such cases is controversial, as removal of a non-inflamed appendix converts a clean procedure into a clean-contaminated one and may increase the risk of mesh infection.⁶ In our patient, the appendix was healthy and was preserved, allowing safe completion of Lichtenstein mesh hernioplasty.

A tight internal ring is a common intraoperative finding in long-standing congenital hernias. Partial incision of the internal ring was required in our case to facilitate atraumatic reduction of contents. This step should be performed cautiously, particularly in elderly patients with distorted anatomy due to chronic fibrosis.

This case highlights a rare presentation of Amyand-type congenital inguinoscrotal hernia in old age and

underscores the diagnostic challenges associated with long-standing hernias. Awareness of this entity is essential to avoid misdiagnosis and to guide appropriate intraoperative decision-making, ensuring optimal surgical outcomes.

CONCLUSION

Amyand-type congenital inguinoscrotal hernia may remain undiagnosed until old age and can present as a diagnostic pitfall by mimicking hydrocele. Awareness of this rare entity and careful intraoperative assessment are essential for safe surgical management. Open mesh hernioplasty provides good outcomes when the appendix is non-inflamed.

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