CASE REPORT

Amyand's hernia presenting as an acute scrotum

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Introduction

Amyand's hernia is an inguinal hernia that contains the vermiform appendix. According to older studies, Amyand's hernia occurs in 1% of all inguinal hernias, while appendicitis in an Amyand's hernia accounts for 0.1% of all appendicitis. More recent studies suggest an even smaller prevalence, with Amyand's hernia occurring in 0.4-0.6% of all inguinal hernias [1]. Preoperative diagnosis presents a clinical challenge due to non-specific symptoms and signs, and a lack of distinct radiological features. This condition is commonly diagnosed during surgery, and it is often clinically misdiagnosed as irreducible inguinal hernia. Mortality of Amyand's hernia ranges from 14-30% and was due to peritonitis and sepsis. Sharma et al. reported a mortality rate of only 5.5%. They attributed this to early appropriate treatment and good postoperative care [2]. We present a case of a 68-year-old male who had an Amyand's hernia.

Case presentation

A 68-year-old obese male (BMI-32), with Diabetes mellitus and hypertension, presented with right-sided scrotal pain and swelling for 4 days. He had only one testis (on the right side), for which he had not been investigated previously. His symptoms were of acute onset, and he had not noticed any inguinoscrotal lumps before this. He had not opened bowels for 2 days but had passed flatus. There was no abdominal pain or vomiting. On examination, his right scrotum was swollen and red with scrotal wall cellulitis. Gentle palpation revealed a very tender and swollen testis and epididymis suggestive of epididymal-orchitis with possible abscess formation. Above the testis, the spermatic cord was very tender and swollen suggestive of associated funiculitis. There was no apparent swelling or expansile cough impulse in the right groin. His left scrotum was underdeveloped and the testis was absent and there was no swelling or tenderness on the left side. The abdomen was soft and not distended. Bowel sounds were normal. He was afebrile. He had a pulse rate of 95/minute, blood pressure of 159/77, and a respiratory rate of 18/minute.

He was started on intravenous antibiotics after sending urine for culture and blood for routine investigations. He was given adequate pain relief and scrotal support. He had a white cell count of 15.2 x 109/L, with 82% neutrophils. C-reactive protein level was 139mg/L. Other blood investigations were normal.

However, an ultrasound scan of the abdomen and scrotum was suggestive of a right inguinoscrotal hernia, containing omentum and a small hydrocele. There was no detectable undescended testis on the left side.

Considering the findings of the scan, a decision was made to explore the right groin under general anaesthesia. Using a right groin crease incision, the inguinal canal was opened. A grossly oedematous and inflamed spermatic cord was seen with a narrow indirect inguinoscrotal hernia. The hernia sac was carefully opened into and contained an inflamed appendix with the ruptured tip lying in the scrotum. The sac also contained a thin strand of omentum. The caecum was lying intra-peritoneally and there was no sliding component to the hernia. The scrotal contents were also grossly oedematous and infected.

An appendicectomy was done. Two difficult intra-operative decisions remained. The only way to control the scrotal sepsis was to do an orchidectomy although this was the patient's only testis. Also, an endogenous tissue repair was not feasible with the dilated internal ring due to the oedematous spermatic cord and weak posterior wall. Therefore, a right orchidectomy with the division of the spermatic cord at the internal ring and a mesh repair of the hernia was done using a light polypropylene mesh. The skin was closed with 3/0 polypropylene vertical mattress sutures. A suction drain was placed in the scrotum.

The patient had an uneventful recovery. Intravenous antibiotics were continued until the patient was discharged on the 5th post-operative day. At review one week later, his surgical wound had healed completely and the sutures were removed. He was advised to report back immediately if he develops a discharge from the surgical wound. He is doing well two months after surgery. Endocrinology referral will be

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Table 1. Guide for management of Amyand's hernia as suggested by Lossanoff and Basson [5]

Type of hernia	1	2	3	4
Salient features	Normal appendix	Acute appendicitis localized in the sac	Acute appendicitis, peritonitis	Acute appendicitis, other abdominal pathology
Surgical management	Reduction or appendicectomy (depending on age), mesh hernioplasty	Appendicectomy through hernia, endogenous repair	Appendicectomy through laparotomy, endogenous repair	Appendicectomy, diagnostic workup and other procedures as appropriate

done at the next clinic visit.

Discussion

Amyand's hernia is named after the French surgeon Claudius Amyand, who performed the first recorded successful appendicectomy in 1735. The patient was an 11-year boy who had an acutely inflamed appendix within an inguinal hernia sac. There is no consensus on the optimal management approach to Amyand's hernia [3]. It was suggested by Milanchi and Allins in 2007, that a mesh repair without appendicectomy should be considered if a normal appendix is discovered upon an exploration of hernia contents. They also suggested that if the appendix was inflamed, a laparoscopic appendicectomy should be followed by open hernia repair without a prosthetic mesh [4]. But a more comprehensive guideline was provided by Lossanoff and Basson in 2008. They suggested 4 different approaches to 4 types of Amyand's hernia (Table 1).

Although the above guideline was comprehensive, our patient who had a ruptured appendix with gross scrotal sepsis and a weakened posterior wall did not strictly belong to any of these categories. An orchidectomy and mesh repair (using a light polypropylene mesh) was done weighing risks versus benefits.

All authors disclose no conflict of interest. The study was conducted in accordance with the ethical standards of the relevant institutional or national ethics committee and the Helsinki Declaration of 1975, as revised in 2000.

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Learning Points:

- An acute scrotum even in an elderly male could pose life-threatening complications
- Early ultrasonography should be considered even in the elderly male presenting with an acute scrotum.