Case report

Expect the unexpected - Amyand's hernia: A Case Report

ABSTRACT

Background: Amyand's hernia is a rare type of inguinal hernia when vermiform appendix is identified as its content. This constitutes less than 1% of all groin hernia sac. **Case Representation:** We present successful mesh hernioplasty following appendectomy in a rare case of inguinal hernia with inflamed appendix as its content (Type 2) in an elderly man with no clinical signs of appendicitis. **Conclusion:** Amyand's hernia is a rare situation, hard to diagnose preoperatively. The authors emphasise that the young surgeons are well-read, and adequately prepared to take prompt decisions intraoperatively for the patient's safe recovery post-operatively.

Keywords - Amyand's hernia, Type 2 variant, Mesh hernioplasty

INTRODUCTION

Amyand's hernia is defined as when the appendix is trapped within an inguinal hernia. Incarceration of the appendix most commonly occurs within inguinal and femoral hernias, but may arise to a lesser extent in incisional and umbilical hernias [1]. It has been referred to as an inguinal hernia containing (a) a non-inflamed appendix, (b) an inflamed appendix, or (c) a perforated appendix [2]. Acute appendicitis within an Amyand's hernia could be a life threatening condition unless tackled immediately. In this case report, we present a rare case of inguinal hernia with inflamed appendix as its content in an elderly man with no clinical signs of appendicitis.

CASE REPORT

Gentleman aged 65 years, hypertensive, presented to our outpatient department with complaints of right sided inguino-scrotal swelling for the last 5 years, associated with dull aching pain over the swelling for a duration of one week, with no other accompanying history. Local examination revealed a complete, reducible, indirect inguinal hernia on the

right side. Left side was normal. Scrotal examination was normal with both testes palpable. Tone of the abdominal muscle was poor. Laboratory investigations were within normal limits. Ultrasound imaging of the abdomen showed right sided indirect inguinal hernia with omentum as its content.

Patient was planned for elective Lichenstein tension free hernioplasty under spinal anaesthesia. Intraoperatively, the sac was identified and opened. The content of the sac was an inflamed, congested appendix (Fig 1). The tip and base showed no evidence of perforation or necrosis. An appendectomy was performed, and the remnant stump and caecum were brought back into the abdominal cavity. The hernia repair was achieved by carrying out a Lichtenstein hernioplasty using Prolene mesh and Prolene sutures. A broad-spectrum antibiotic was postoperatively administered for 5 days. The patient was discharged with no complaints, and recovered uneventfully. Histopathological examination of specimen of the excised appendix showed features of suggestive of recurrent acute appendicitis.

DISCUSSION

The presence of a vermiform appendix within an inguinal hernia sac was first described by Claudius Amyand in 1735 hence the entity takes its name [3]. Acute appendicitis has been documented in 0.1 % - 0.62% of groin hernia sac [4,5]. Amyand hernia usually occurs on the right side, probably as a consequence of normal anatomic position of the appendix. It has also been reported on the left side which may be associated with situs inversus, intestinal malrotation or mobile caecum [6]. Acute appendicitis occurs much less frequently, and perforated appendix and peri-appendicular abscess formation within an inguinal hernia sac is an extremely rare clinical entity [7].

Inguinal hernias are largely diagnosed clinically and ultrasonogram (USG) of the abdomen-pelvis is performed to know the contents of the sac. USG may fail to identify appendix as a content and may require a skilled radiologist [8]. Contrast enhanced computed topography (CECT) and Magnetic Resonance Imaging (MRI) are rarely performed pre-operatively in uncomplicated inguinal hernia. Therefore diagnosing Amyand's hernia is rare and incidental intra-operatively.

Losanoff and Basson [9] proposed a classification to identify and treat Amyand's hernias. A Type 1 hernia has a normal appendix in an inguinal hernia, which is managed with reduction and mesh repair. Types 2–4 have acute appendicitis within an inguinal hernia sac. Type 2 has an inflamed non perforated appendix. Type 3 has a perforated appendix and type 4 is complicated with intra-abdominal pathology. Type 2–4 hernias are managed with appendectomy and primary repair (without mesh). In addition, to the primary repair and appendectomy, type 3 includes a laparotomy for abdominal irrigation, possible orchiectomy or colectomy and type 4 includes investigation of pathology.

Our patient was diagnosed intraoperatively to have type 2 variant of Amyand's hernia. The recommendation is to perform a primary hernia repair without mesh. Owing to the clinical examination, normal laboratory parameters, intraoperative finding of mild appendicitis, a decision was made to perform tension free hernioplasty following appendectomy. He was treated with intravenous antibiotics during the post-operative period. He recovered with no complications. Literature supports hernioplasty with synthetic mesh with adequate intra-operative irrigation and post-operative intravenous antibiotics [10].

Although Amyand's hernia has caused some concern in the past, recent reports show that if treated properly, it does not add morbidity or mortality beyond that of a typical inguinal hernia. Surgeons should examine carefully the vermiform appendix before proceeding with appendectomy and estimate the necessity of mesh repair depending on the vermiform appendix's situation.

CONCLUSION

Amyand's hernia is a rare situation, hard to diagnose preoperatively. Therefore it is imperative for surgeons to be aware about the probabilities of different contents in a hernial sac during the repair. The diagnosis of most clinical scenario befits the quote "The eyes see what the mind knows". The authors emphasise that the young surgeons are well-read, adequately prepared to expect the unexpected intra-operative findings, and thereby are competent to see themselves, the patient and their family through a safe post-operative recovery.

ABBREVIATION

USG - Ultrasonogram

CECT - Contrast enhanced computed topography

MRI - Magnetic Resonance Imaging

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FIGURE LEGENDS

Fig 1 Inflamed and congested appendix as the content of the inguinal indirect hernia sac, as seen intra-operatively