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Amyand's Hernia: An Extremely Rare Condition of Inguinal Hernia Accompanied With Acute Appendicitis

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Introduction: A vermiform appendix in an inguinal hernia, inflamed or not, is known as Amyand's hernia. Here we present a case with Amyand's hernia.
Case Presentation: A 63-year-old Caucasian man with a perforated vermiform appendix in the hernia sac (acute suppurative appendicitis), presented an incarcerated right groin hernia and underwent simultaneous appendectomy and hernia repair.
Conclusions: A surgeon repairing hernia may encounter unexpected intraoperative findings, like Amyand's hernia. It is important to be always prepared for such conditions and apply the appropriate treatment.

Keywords: Amyands Hernia; Acute Appendicitis

1. Introduction

The presence of acute appendicitis in the sac of inguinal hernia is an extremely rare condition and very few cases have been reported having it. The condition, called Amyand's hernia, was named after Claudius Amyand, who first described this condition in a 11-year-old boy in 1735.

2. Case Presentation

A 63-year-old man presented a 3-day history of swelling and discomfort in the right inguinal region, associated with nausea and vomiting. Last defecation was dated one day before admission. On admission the patient was sub febrile (38°C). Examination revealed an irreducible right inguinal hernia with severe localized tenderness, warmth and redness. Marked tenderness was detected on the right lower abdomen palpation and the right hemiscrotum was moderately swollen and painful in palpation.

Laboratory results revealed leukocytosis (12400/mm^3, 86% neutrophils). Surgical exploration was performed under general anesthesia and opening the inguinal canal was performed through transverse lower abdominal skin crease. Dividing the cremaster muscle, the surgeon opened swollen hernia sac and found the suppurative perforated appendix. About 10 mL purulent exudate was aspirated from the hernia sac. Appendectomy, high ligation of the hernia sac and anatomical inguinal herniorrhaphy were carried out. The wound was primary closed, without drainage.

Antibiotics (1 gr ceftriaxone twice a day and 500 mg metronidazole three times a day) were administered intravenously. The histological examination again confirmed the diagnosis of an acute appendicitis. The patient evolved favorably during the postoperative period.

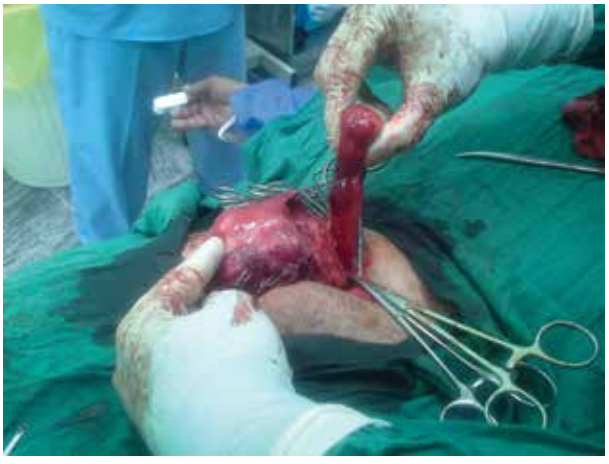

Figure 1. Acute Intraherniary Appendicitis

Implication for health policy/practice/research/medical education:
The authors hereby affirm that the manuscript is original and that all statements asserted as facts, are based on authors' careful investigations and accuracy. This work has not been published before, it is not under consideration for publication anywhere else and its publication has been approved by all co-authors. This case had been admitted in Kashani Hospital, to the surgery unit. We verify that all the authors have read the manuscript and approve its submission.

3. Discussion

The presence of the appendix in the hernia sac is found in only 1% of inguinal hernias (1) and an inflamed appendix is found in the inguinal hernia in only 0.13% of cases (2.) Male sex is associated with a higher prevalence and the diagnosis is difficult to make preoperatively. Amyand's hernia may be suspected in a tender hernia without the signs and radiological findings of an obstruction (3). Computed tomography (CT) scanning can sometimes be helpful for the diagnosis of this particular condition. The differential diagnosis of Amyand's hernia includes strangulated hernia, strangulated omentocele, Richter hernia, hemorrhagic testicular tumor, acute hydrocele, inguinal adenitis and epididymitis.

Abu Dalu and Urca (4, 5) have proposed that the entrapment of the appendix in the hernia sac leads to adhesion formation and compromising the appendix blood supply, which then causes inflammation and bacterial overgrowth. The treatment of this condition is appendectomy through herniotomy with primary hernia repair, using the same incision (1, 4). Mesh should not be used in the treatment of contaminated abdominal wall defects because the prosthetic material can increase the risk of wound infection and appendiceal stump fistula (3). Amyand's hernia is an extremely rare condition and is often misdiagnosed.

The majority of the reported cases presented the features of an obstructed or strangulated inguinal hernia, with or without features of appendicitis (3, 6-8). The diagnosis is often made intraoperatively, as the patient undergoes surgical exploration for a complicated inguinal hernia, as in the present case, where appendix was incidentally found in the hernia sac. A preoperative ultrasonography (9) and CT scan of the abdomen could be helpful for diagnosis, but the latter is not a routine practice following the clinical suspicion of a complicated inguinal hernia (8). Appendix presence within the hernia sac does not require appendectomy and every effort should be made to preserve the organ found in the hernia sac for an uneventful postoperative course (10). However, some suggest to perform the appendectomy in all cases of left-sided Amyand's hernia, to prevent any atypical clinical presentation of appendicitis in future, even if the appendix is normal, because in these cases the caecum is mobile, the patient has situs inversus or intestinal malrotation (11).

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Authors' Contribution

Author Reza Eshraghi Samani MD: surgeon, Seyed Ali Reza Hosseini MD: surgeon, Shahab Shahabi Shahmiri MD, MPH: surgeon Assistant and writing case report and Lotfallah Abedini MD: gathering data.

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