Asian Journal of Case Reports in Surgery

4(2): 1-4, 2020; Article no.AJCRS.56315

A Case Report on Amyand's Hernia

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Authors' contributions

This work was carried out in collaboration among all authors. Author JL designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors BD and MB managed the analyses of the study. Author MB managed the literature searches. All authors read and approved the final manuscript.

Article Information

Editor(s):
(1) Dr. Fehmi Kaçmaz, Uskudar University, Istanbul, Turkey.
Reviewers:
(1) Carlos Augusto Real Martinez, São Francisco University Medical School, Brazil.
(2) Devang Bharti, ABVIMS & Dr. RML Hospital, India.
Complete Peer review History: http://www.sdiarticle4.com/review-history/56315

Case Study

Received 16 February 2020
Accepted 23 April 2020
Published 29 April 2020

ABSTRACT

Amyand's hernia (AH) is an atypical and rare hernia, defined by the incarceration of an appendix, inflamed or not, in a hernial opening of the abdominal wall. Amyand's hernia is a rare disease. Here we present a case of Amyand's hernia and report the clinical presentation, management and compare it to the literature. Knowledge of this rare pathology is essential in order to allow a preoperative diagnosis and rapid and adequate treatment.

Keywords: Amyand's hernia; strangulated inguinal hernia; appendectomy.

1. INTRODUCTION

An Amyand's hernia (AH) is an appendix contained in an inguinal hernial sac, often straight. The age of the patients can vary between 3 weeks and 92 years. Its incidence in the literature is very variable (0.2–1.7%) and the presence of associated acute appendicitis is extremely rare (0.07–0.13%). Mortality varies from 5 to 30% in relation to severe peritonitis secondary to appendicular perforation [1]. We present a case in which an Amyand's hernia was discovered in intra-operatively.

The interest of our study is to assess the prevalence and clinical characteristics of patients operated on for emergency Amyand hernia.

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2. CASE REPORT

A 60-year-old man with a history of chronic smoking presented with a right inguinal swelling that had developed in the past 2 years and had become painful for 12 hours. The right inguinal hernia was symptomatic and had progressively enlarged over time without any bowel habits or history of intestinal obstruction.

On physical examination, his abdomen was soft and non-distended. An inguinal examination was significant for a right-sided, painful, irreducible mass without scrotal involvement. A strangulated inguinal hernia was mentioned (Fig. 1). Also, the patient was apyretic with a general state preserved. A biological check-up was normal.

The operative indication was asked urgently with a spinal anesthesia. The right inguinal hernia repair was approached with a 5 cm right-sided oblique incision parallel to the inguinal ligament. Intraoperative exploration revealed an inguinal hernial sac with a thickened and infiltrated wall, containing the cecum with its appendix with a swollen phlegmonous point (Fig. 2). An inguinal appendectomy was performed followed by a hernia repair according to Bassini by lowering the conjoined tendon on the crural arch by separated stitches in X with the non-absorbable thread No. 2. The anatomopathological examination concluded in an acute and suppurative endo-appendicitis. The immediate post-operative follow-up was favorable.

The patient was discharged the next day. He returned to hospital 1 month later with no complications and no recurrence of his hernia.

3. DISCUSSION

Amyand's hernia is an atypical hernia, defined by the incarceration of an appendix, inflamed or not, in a hernial opening of the abdominal wall. The first appendectomy through a hernial sac was successfully performed by Amyand in 1735 in London [2]. It is a rare pathology representing

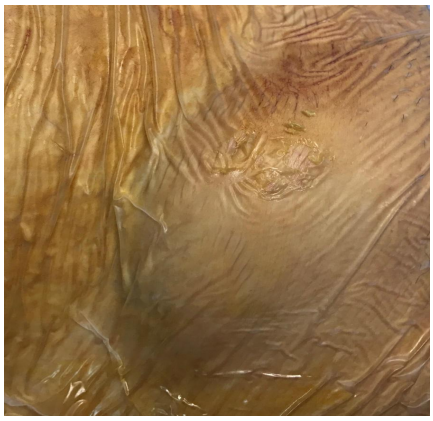

Fig. 1. A strangulated inguinal hernia

Fig. 2. Hernia sac opened containing cecum and inflammatory vermiform appendix

0.13% of all acute appendicitis and 1% of strangulated hernias according to Ryan [3]. From 1959 to 1999, thirteen cases of intra-hernial appendicitis were reported across all sites [4]. The hernial site can be umbilical, at the level of the line of Spiegel, obturator, diaphragmatic, or even in the way of a laparoscopic trocar, but the most frequent site remains inguinal or crural right [5]. However, the crural hernia is classically described in post-menopausal women with a sex ratio reaching 0.16 [6,7], which makes a particularity of our case occurring in a man. The formation of an inguinal hernia is generally due to the combination of abdominal hyperpressure factors (chronic cough, chronic constipation and urinary retention, abdominal obesity ..) and weakening of the abdominal wall noted in advanced age and obesity. Concerning the pathophysiology of appendicitis, the most likely mechanism seems to be compression of the appendix in the inextensible inguinal orifice with strangulation of its meso and creation of secondary ischemic phenomena [8]. The usual clinical picture of an Amyand hernia is often atypical, making positive diagnosis difficult [7]. Usually it is that of a strangulated hernia without occlusive syndrome with inconsistent general signs [9]. According to Lawrence, the discovery of local redness and warmth associated with subcutaneous crepitation of the inguinal region generally corresponds to an appendicular perforation. However, no formal anatomopathological correlation exists between the intraoperative, inflammatory or not condition of the appendix, and the clinical picture [7].

In our case, the patient was apyretic with a general preserved condition and there were no local inflammatory signs despite the phlegmonous aspect of the appendicular tip. Biology inconstantly shows an inflammatory syndrome, the absence of which does not eliminate a local complication of the hernia (appendicitis, appendicular perforation, etc.). The diagnosis is very often made intraoperatively as in our case. In a series of 60 hernias by Amyand published by Weber, the diagnosis was made preoperatively in a single patient [10]. In Inan's series, three of the eleven published patients underwent an abdominopelvic CT scan, which was diagnosed in only one [9]. The low use of preoperative imaging can be explained by the low incidence of the disease [7]. In case of suspected acute intraherniary appendicitis, an ultrasound [11] or computed tomography (CT) [12] should be done to assess the condition of the appendix, its length, the position of the cecum and thus determine the route first and the surgical technique. Our patient received no imaging due to the evidence from the clinical examination. The use of imagery is justified in the face of diagnostic doubt and with a view to eliminating other probable diagnoses (adenophlegmon, tumor, aneurysm of a femoral artery, etc.). For CT, the use of multiplanar reconstructions greatly facilitates the diagnosis. Management is always surgical. Most authors often recommend an inguinal appendectomy [9]. If appendicitis is complicated by perforation with peritonitis, midline laparotomy or Mc Burney should be performed [4,9]. The cure for inguinal hernia is usually done by simple raphia according to the technique of Bassini [13]. A synthetic prosthesis should be prohibited, which, according to several authors, increases the risk of postoperative infection [9,13,14]. Immediate and secondary postoperative follow-ups are generally simple if the diagnosis is made early and surgical treatment is started in time [4,7,9,14].

4. CONCLUSION

Amyand's hernia is a rare occurrence, but offer variety in their presentations and managements, which often presents itself in an atypical clinical picture requiring an appendectomy.

CONSENT AND ETHICAL APPROVAL

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors. As per international standard or university standard written patient consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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