



Case Report

A Strangulated Amyand's hernia: The first case report in Syria

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ARTICLE INFO

Keywords:

Strangulation

Appendix

Amyand's hernia

ABSTRACT

Amyand's hernia is a rare case of inguinal hernia where the hernia sac contains the appendix, and depending on the condition of the appendix, this type is classified into under types where the appendix can be normal, inflamed, or even perforated. Accordingly, the patient's condition can be good or bad. In our case, we have a 13-year-old child who suffers from abdominal pain and discomfort. He is referred to the emergency department with this complaint. By clinical and radiological examination, the presence of an inguinal hernia containing the appendix was found. Based on that, we performed emergency and investigative surgery in order to determine the condition of the appendix and whether there is suffocation or not. It was found by surgical opening that the hernia was incarcerated and this required excision of the appendix and repair of the hernia.

1. Introduction

An inguinal hernia is defined as the exit of the contents of the abdominal cavity through the inguinal canal. It has many types, including Amyand's hernia, where the hernia sac contains the appendix, and it is one of the very rare cases of inguinal hernia. This condition was first described by the French surgeon Claudius Amyand, who performed a successful appendectomy in 1735 [1]. Symptoms in Amyand's hernia are varied, as it can be asymptomatic or even incarcerated and asymptomatic, but it can also develop into acute appendicitis within the hernia sac and this may result in perforation or abscess formation. The presentation of perforated appendicitis within an incarcerated inguinal hernia is even less common, occurring in approximately 0.13% of a cases of acute appendicitis [2]. As for the diagnosis, it is often during investigational surgery, as it is difficult to detect this type of hernia without surgery. However, clinical examination and radiographic investigations, such as echocardiography, may play a role in detecting such hernias. As for the management, it depends mainly on the condition of the hernia, for example, is it strangulated or incarcerated, and whether there is appendicitis or advanced cases of infection such as abdominal sepsis, all of this affects the type of treatment in addition to the age of the patient, but in general, appendectomy within the hernia sac With hernia repair is a curative treatment. In this case, we will present a detailed presentation of the Amyand's hernia in a 13-year-old patient.

This case report has been reported in line with the SCARE criteria 2020 [7].

2. Case presentation

A 13-year-old male patient referred to the ambulance department with a complaint of general fatigue and abdominal pain with slight pyrexia. By questioning the parents, it was found there is no medical, allergic or surgical history, in addition to he didn't experience any trauma to the abdominal area during the previous days, and the appetite for food was normal. On physical examination, the abdomen was tense and tight with increased pain during palpation, also The patient's vital signs were unstable, where we noticed a rise in temperature with tachycardia and Hyperventilation. By requesting laboratory investigations, all analyzes were normal except for an increase in leukocytes, which indicates the possibility of inflammatory case. All of the above raised suspicion of appendicitis, but we needed more confirmations, so we performed an ultrasound imaging of the abdominal area, and the result was an inguinal hernia containing an intestinal loop that shows bloody perfusion, in addition to the presence of infiltrates and extrusions around the hernia area. Then it was decided to perform emergency surgery for fear of strangulation at the level of the hernia, where we found the appendix swollen within the hernia sac and this leads to the diagnosis of Amyand's hernia.

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Received 20 October 2021; Received in revised form 10 November 2021; Accepted 10 November 2021

Available online 17 November 2021

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The treatment was done by radical excision of the appendix for fear of perforation and generalized inflammation, in addition to repairing the hernia (Figs. 1 and 2) with the support of the floor to prevent recurrence. The patient was placed on a dose of 1000 mg cephalosporins to prevent infection in the surgical site and discharged from the hospital after 24 hours of stabilization.

3. Discussion

Amyand's hernia is a rare type of inguinal hernia, (less than 1% of inguinal hernias) [3], where the hernia sac contains the appendix, which may be inflamed or even perforated, and based on the condition of the appendix, the hernia is classified into 4 types, including the following: Type I hernia has a normal appendix in an inguinal hernia. Types II to IV have acute appendicitis within an inguinal hernia sac. Type II has an inflamed non-perforated appendix. Type III has a perforated appendix and type IV is complicated with intra-abdominal pathology. This type of inguinal hernia was first diagnosed by the French surgeon Claudius Amyand, who performed the first appendectomy in 1735 [4,5]. The main complaints of Amyand's hernia vary according to its type. It may be asymptomatic if the hernia is not strangulated and the appendix is normal. In other cases, the patient may present with severe abdominal pain in addition to fever, fatigue, vomiting, and even generalized abdominal infection in the event of appendic perforation. Detection of hernia is carried out by many investigations, including radiography, such as echo, in addition to a physical examination that shows a tense abdomen and the general poor condition in the case of appendicitis, in addition to the role of laboratory investigations in confirming the diagnosis, but we must emphasize that the gold standard in detecting this type of hernia are an investigational surgical opening due to the variety of symptoms and differential diagnoses. The treatment depends mainly on appendectomy and repairing the hernia to prevent any complications or recurrence [6]. In our case, a 13-year-old patient came to the emergency department with a complaint of general fatigue and abdominal pain with vomiting. On clinical examination, the abdomen was tense, with an increase in breathing rate. We also performed ultrasonography, where we noticed the presence of an intestinal loop that showed bloody perfusion inside the hernial sac. In order to manage the case, it was decided to perform an emergency surgery, where the appendix was removed and the hernia repaired. After the surgical repair, the patient's condition improved, where we followed him up for two weeks, and we noticed that the symptoms had disappeared with no recurrence. From all of the above we can conclude that Amyand's hernias a condition that must be investigated quickly because of the

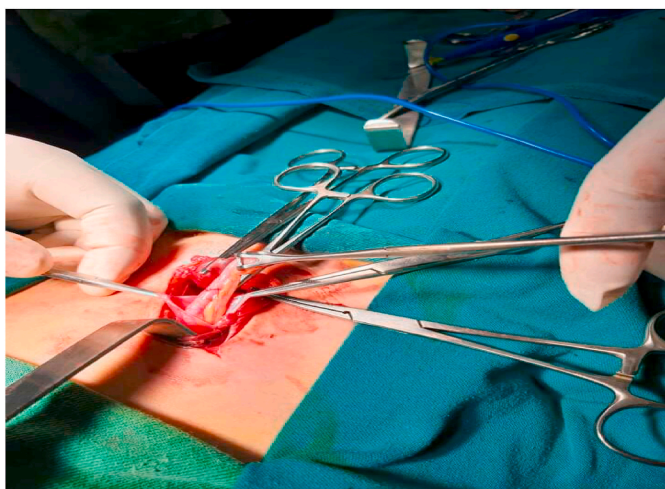


Fig. 1. The picture during the surgery that shows repairing the Amyand's hernia.

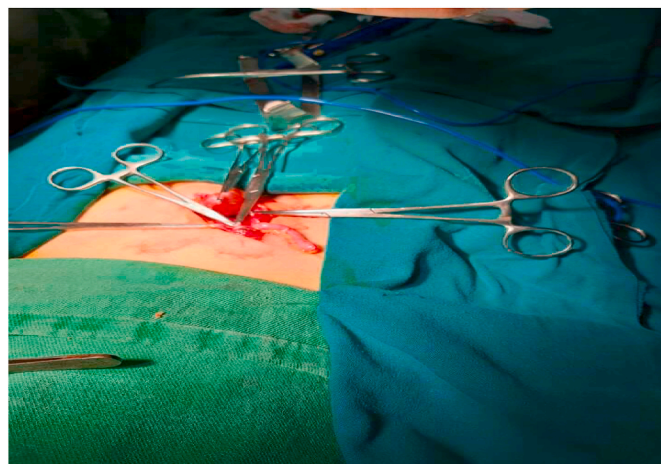


Fig. 2. The picture during the surgery that shows fixation the Amyand's hernia.

possibility of its development into advanced cases that may affect the patient's life, and in this case we present a detailed presentation that can be considered a guide for doctors in order to guide them to deal with such hernias.

4. Conclusion

Amyand's hernia is a rare type of inguinal hernia and has many differential diagnoses. Therefore, it requires the presence of good medical and clinical experience to ensure prompt management to prevent the occurrence of complications harmful to the patient's health. Finally, we hope that this case will provide an addition to the medical literature, with regard to dealing with such cases, especially the methods of their diagnosis and treatment.

Ethical approval

This case reports didn't require review by Ethics committee ALRAZI HOSPITAL, ALEPPO, SYRIA.

Sources of funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Consent

Written informed consent was obtained from the patient for publication of these two case reports and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Author contribution

Hidar Alibrahim: contributed in study concept and design, data collection. MOUHAMMAD ALBATTOUR: contributed in writing the paper. Sarya Swed: contributed in writing the paper. Bisher Sawaf: contributed in writing the paper.

Registration of research studies

Not applicable.

Guarantor

Sarya Swed

Declaration of competing interest

All authors declare no conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.amsu.2021.103064>.

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