

AMYAND'S HERNIA: A CASE REPORT

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ABSTRACT

Amyand's hernia (AH) is a form of inguinal hernia which is consider as very rare and this type of hernia occurred up to 1% of all inguinal hernia cases. In this type of inguinal hernia, the content of hernia sac is appendix. Most patient with AH often remains asymptomatic and diagnosed intraoperatively. The diagnosis is challenging, since needs a high index of suspicion and imaging is key. Surgery is the mainstay management. We report a case of Amyand's hernia that was managed operatively in our institution.

KEYWORDS : Amyand's hernia, (AH) vermiform appendix, Appendicectomy, Inguinal hernia, Hernioplasty.

INTRODUCTION

An inguinal hernia is a protrusion of abdominal-cavity contents through the inguinal canal. Inguinal hernia sac contains any abdominal organ including small or large bowel. Amyand's hernia is a very rare and uncommon form of inguinal hernia where the vermiform appendix is present in hernia sac. The incidence of having abnormal appendix within the hernia sac varies from 0.5% to 1%.

The entity of Amyand's hernia has an incidence of 1% and is complicated by acute appendicitis in 0.8 to 0.13% of case, whereas only 0.1% of cases complicate into acute appendicitis.

Incarcerated bowel containing hernias are the leading cause of mechanical bowel obstruction. Prompt surgical intervention is indicated due to increased changes of strangulation.

It affects both adults and kids along with also the contents of the gut sac might change from Cecum, liver, uterus, fallopian tube, omentum, or some Meckel's diverticulum along with an appendix. It received its name since the first man to report that the existence of perforated appendix was Claudius Amyand in 1735.

The surgeon might encounter unusual signs, like a Vermiform appendix partially or fully found in the hernia sac, inflamed or non-inflamed or adherent into the sac walls. An inguinal hernia does not specific for age sex or group; as reported in literature, cases of Amyand's hernia found in the neonatal period for 9-2 decades, although left-sided Amyand's hernia is reported as well.

Case presentation**History**

A 40-year-old male writer by profession with normal BMI presented to our department with complaint of swelling in the right inguinal region for the past 4 months initially it was small and gradually increase in size and associated with dragging pain. There was no history of abdominal pain and vomiting or Constipation. No history of any previous surgeries or comorbidities.

Physical examination

On examination, there was an indirect right inguinal hernia incomplete, and reducible type with positive cough impulse.

Investigation

Patient was diagnosed clinically as indirect inguinal hernia. Haematological workup was within normal limits. Ultrasound of inguinoscrotal region showed 2.5 cm defect with bowel and omentum as content. Prostate size was 25cc post voidal residual urine was nil.

Procedure

A Preoperative diagnosis of right inguinal hernia was made and was planned for hernia mesh repair. Intraoperatively an indirect sac was found with appendix as its content. The appendix was slightly congested, not inflamed and was proceeded with appendectomy along with excision of the sac and Lichtenstein tension free mesh repair was done. The postoperative period was uneventful. Patient was discharged on postoperative day 3.

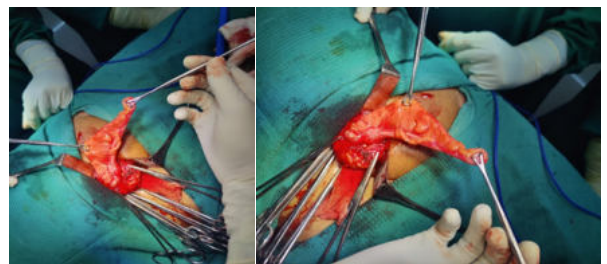


Figure: intraoperative images showing appendix as a content in hernial sac.

Follow-up and outcome

The patient was discharged on 3rd post-operative day on oral anti-biotics and followed up after one week of surgery. HPE report was suggestive of acute appendicitis. Patient was doing well and the suture site was healthy.

DISCUSSION

Amyand's hernia (AH), the disease has been originally clarified and handled in 1735 in Claudius. Amyand Losanoff and Basson indicate Amyand's hernia may be dealt with reduction or appendectomy, based on co-morbidities, Amyand's hernia accounts for 0.1 percentage of instances of all appendicitis. Appendectomy with simultaneous hernioplasty was completed prophylactically for potential future complication that may lead to appendicitis.

The Choice to keep or remove the appendix relies upon the

individual's era, endurance, and hazards of expanding acute appendicitis. The young people include a much greater chance of afflicted by acute appendicitis in contrast for this middle era or elderly men and women. Amyand's hernia is also a rare and hard to diagnose disease, being often occasionally discovered intraoperatively.

In terms of inguinal hernia detection, the initial use of ultrasound, represents a sensitive and cost-effective progression for the evaluation of the patient with a clinical history suggestive of a hernia, enables the possibility of differentiating affiliated intra-abdominal organs. Therefore, an appendectomy had to be performed to enable structural reduction of the hernia despite the absence of visible signs of acute appendicitis.

Considering ultrasound imaging in a large-sized inguinal hernia even if it is reducible may be beneficial in reducing the complications. Early analytical imaging use may confound an instant pre-operative identification of AH. Right-sided Amyand's hernias occur more often than left due to the anatomical location of the appendix on the right. Left-sided Amyand's hernias are very rare ⁽³⁾. Laparoscopic repair has also been described in paediatric age group ⁽⁷⁾.

The mainstay management is the open surgery, but in recent years the laparoscopy approach is summing cases; giving benefits of shorter hospital stay, faster recovery, less postoperative pain, among others. While CT scan may help in making a preoperative diagnosis in those cases presented with an acute abdomen the diagnosis of Amyand hernia is usually made intraoperatively ⁽¹¹⁾.

The underlying mechanisms that cause acute appendicitis within an Amyand's hernia include decrease blood supply of the appendix due to adhesions that may cause non-reducibility of the hernia and compression in the external ring originating from increases in intra-abdominal pressure. These factors lead to recurrent inflammation and bacterial overgrowth. The intraoperative manipulations that can by themselves trigger an inflammatory process.

Table 1: Losanoff and Basson's classification.

| Classification | Description | Surgical management |
|----------------|--|---|
| Type 1 | Normal appendix within an inguinal hernia | Hernia reduction, mesh repairs, appendectomy in young patients |
| Type 2 | Acute appendicitis within hernia, no abdominal sepsis | Appendectomy through hernia primary repair of Hernia, no mesh |
| Type 3 | Acute appendicitis within an inguinal hernia, abdominal wall, or peritoneal sepsis | Laparotomy, appendectomy, primary repair of hernia, no mesh |
| Type 4 | Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology | Manage as type 1 to 3 hernia investigate or treat second condition as appropriate |

The Losanoff and Basson's classification presented above offer satisfactory guidance system for management of Amyand's hernia. A normal looking appendix in the hernial sac does not always require appendectomy. Appendectomy adds the risk of infection to an otherwise clean procedure. Whether to remove or leave behind a normal appendix is a clinical dilemma because no evidence-based information exists. The decision should be based on common sense, taking into account the patient's age, life expectancy, life-long risk of developing acute appendicitis, and the size and overall anatomy of the appendix.

Definitive preoperative diagnosis poses a challenge due to

indistinct clinical signs and symptoms. We report a case that was managed by open surgery in our institution.

CONCLUSION

Amyand's hernia is a rare presentation of inguinal hernia, in which the appendix is incarcerated within the hernia sac. Amyand's hernia is a diagnostic challenge due to its low incidence, indistinct clinical presentation, and ambiguous appearance on imaging such as CT. Surgery is therefore frequently diagnostic as well as therapeutic. Since the appendix may be non-inflamed when found within the inguinal hernia sac, removal is not always necessary; this is a decision currently dictated primarily by the surgeon's preference.

In the clinical setting of an incarcerated complicated or strangulated inguinal hernia, the initial approach should consider imaging studies; USG or CT can guide the surgical plan, and enables the possibility of identifying involved intra-abdominal organs. Literature review recommends reducing the hernia content and perform no tension hernia repair. In the cases where an inflamed, suppurative or perforated appendicitis were encountered, no prosthetics material should be used because of the increased risk of surgical site infection. Due to the rarity of Amyand's hernia, and the wide variance of its presentation, each case study and review article brings new and useful information to light regarding its treatment and diagnosis.

Conflicts of interest

There are no conflicts of interest

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