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A Rare Case of Amyand's Inguinal Hernia - A Case Report

Dr. Sushrut Sankpal[1], Dr. Amol Patil[2], Dr. Vinish Dwivedi[3]

[1]Senior resident, Grant Government Medical College and Sir JJ Group of hospitals, Mumbai

[2]Senior Post Graduate Medical Officer, Bharatratna Dr Babasaheb Ambedkar Municipal General Hospital, Kandivali

[3]Post graduate Medical Officer, Bharatratna Dr Babasaheb Ambedkar Municipal General Hospital, Kandivali

Abstract: ***Amyand's hernia is a rare hernia defined as an inguinal hernia that contains the appendix within the hernia sac. 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 medium complex public institution. This case report presents a 27 - year - old male with right inguinal hernia, confirmed by ultrasound. The surgery was performed under spinal anesthesia, and the appendix was normal and reduced back. The patient was discharged on the next day of surgery after an uneventful course in the hospital. While the incidence of this type of hernia is rare, the appendix may become incarcerated within Amyand's hernia and lead to further complications such as strangulation and perforation.***

Keywords: Appendix, Incarcerated, Hernia, Inguinal, Case report

1. Introduction

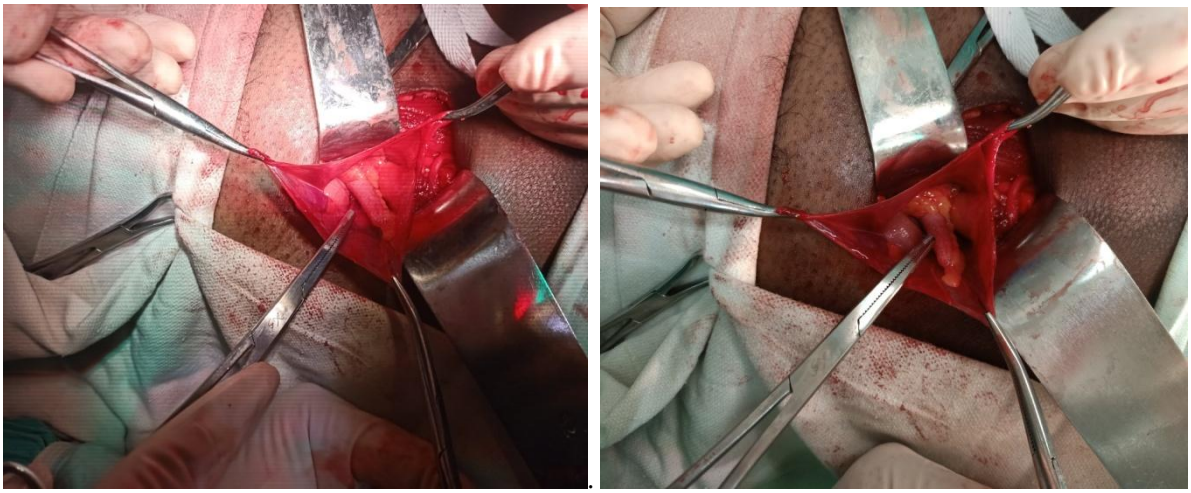
An inguinal hernia is a protrusion of abdominal - cavity contents through the inguinal canal. Inguinal hernia sac contains any abdominal organ including small or large bowel. Amyand's hernia is a very rare and uncommon form of inguinal hernia where the vermiform appendix is present as a content in the sac[1].

In 1735, C. Amyand first described an 11 - year - old boy with an incarcerated inguinal hernia containing a perforated appendix. Amyand's hernia occurs in only 1% (0.19–1.7%) of all inguinal hernia cases and be complicated by acute appendicitis in 0.8to 0.13% of case[2]. Amyand's hernia has also been reported on the left side which may be associated with situs inversus, intestinal malrotation or mobile caecum[3]

Amyand's hernia is classified into four subtypes regarding the clinical symptoms and the situation of the appendix based on Losanoff and Basson's classification
Type 1 Amyand's hernia - There are no inflammatory changes in the groin
Type 2 Amyand's hernia - The septic changes are confined to the hernia sac
Type 3 Amyand's hernia - The sepsis has spread beyond the hernia sac
Type 4 Amyand's hernia - Acute appendicitis and other abdominal lesions[4]

2. Case Report

A 27year male patient with normal BMI presented to Surgery Outpatient department with complaints of right inguinal swelling since 12 months. The swelling had insidious onset, initially it was small, gradually extended to current extent, associated with dragging sensation since 4 months. On physical examination, a swelling of approximately 5x4cm was present in right inguinal region, swelling reduced on lying down. There was a positive cough impulse association with the swelling. Patient was diagnosed clinically as indirect inguinal hernia. Hematological workup was within normal limits. USG Abdomen revealed a 4.2cm defect with contents being bowel. Patient was taken for Lichtenstein Inguinal hernia mesh repair under spinal anesthesia. The surgical procedure was performed by making a 4cm skin incision above and parallel to inguinal ligament. Intraoperative, an indirect sac was identified and dissected and opened by 3 forceps technique, a non inflamed appendix of 3cm, ileal loop, and omentum was present as content. There were adhesions between ileum and the sac. Sac was closed by purse string suture, a Lytle's repair of deep inguinal ring was done and 7x11cm polypropylene mesh was placed. The incision was closed in layers. The postoperative period was uneventful. The patient postoperatively received fluid therapy, Oral fluids were administrated after 6 hours along with soft diet, was started full diet on Day 1 and was discharged on postoperative Day 2with instructions for wound care and follow – up appointments. The patient was advised to avoid heavy lifting and strenuous activities for the next four weeks. The patient was followed up for two weeks after surgery. The patient did not report any complications, and the surgical site had healed well.



3. Discussion

A definitive preoperative diagnosis of Amyand's hernia is rare since the diagnosis is usually made during surgery. Physical examinations, laboratory examinations, and imaging examinations are not always associated with the differential diagnosis of Amyand's hernia. With respect to imaging examinations, CT scanning can facilitate the diagnosis of Amyand's hernia[5]. However, CT is usually not the first choice for an uncomplicated inguinal hernia. Therefore, the diagnosis of Amyand's hernia will be missed at that time. Sonography has been reported as a valuable examination in the preoperative screening of Amyand's hernia since it is cheap and convenient[6].

Generally, the primary management for Amyand's hernia with a non - inflamed appendix is hernia repair without appendectomy. Some clinicians believe that this will decrease the occurrence of postoperative complications because appendectomy will convert a clean surgery into a clean - contaminated surgery. Most surgeons agree that synthetic meshes or plugs should not be used in cases of acute appendicitis (Losanoff - Basson types 2 - 4) within a hernia[7]. This was a case of Losanoff - Basson type 1, the patient's appendix appeared normal, mobile, and did not reduce back into the abdominal cavity, there were adhesions between hernia sac and ileum.

Prosthetic mesh is typically contraindicated in patients with an inflamed or perforated appendix because of the increased risk for wound and mesh infections[8].

4. Conclusion

Amyand's hernia is a rare presentation of inguinal hernias and the preoperative diagnosis of Amyand's hernia remains a challenge. CT and ultrasonography are helpful for the diagnosis but the definite diagnosis should be made by laparoscopy. The treatment of Amyand's hernia should be tailored based on the patient's condition and the type of Amyand's hernia. The application of tensionfree mesh hernioplasty should be performed when appendix is normally presented. If there is acute appendicitis in the hernia sac, appendectomy should be performed and the application of mesh repair should be carefully considered. Attention should be paid to the use of antibiotics and drainage in the operative area. We are still conservative about the application of mesh in hernia sac with acute appendicitis, which requires additional large - scale study to determine whether mesh repair will increase the risk of infection or not. Generally, the primary management for Amyand's hernia with a non - inflamed appendix is hernia repair without appendectomy. Clinicians should have a high index of suspicion for Amyand's hernia and a low threshold for investigating further with imaging. This would allow for a better visualization of the appendix and inguinal canal, and possibly a better surgical outcome.

Ethical approval
No ethical approval is required. Our institution does not demand ethical approval for case reports, as these projects are not investigational.

Consent
Well informed written consent was taken from patient.

Conflict of Interest
Authors declare no conflict of interest

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