



Case Report

An Unusual Case of Amyand Hernia in a 60 Years Old Male and Review of Literature

Authors

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Abstract

Amyand Hernia is a rare atypical hernia characterized by the herniation of appendix into inguinal sac, has incidence of approximately 1%. However, the condition is complicated by acute appendicitis in 0.8%. This may present without symptoms until inflammation of appendix may lead to incarceration, strangulation, necrosis, or perforation. Early symptoms include tenderness and inguinal swelling, may be misdiagnosed as strangulated hernia. This condition is difficult to diagnose clinically. Ultrasonography and computerized Tomography may reveal diagnosis. It is very rarely recognized before surgical exploration. We report a case of Amyand Hernia in a 60 years old male, presented as a right sided inguinal hernia with mild pain in the right groin. He underwent herniotomy and herniorrhaphy, which revealed elongated inflamed appendix with some adhesions to sac, lying in inguinal canal.

Keywords: Amyand hernia, appendix, inguinal hernia, herniotomy, herniorrhaphy, appendectomy.

Introduction

The presence of the vermiform appendix within an inguinal hernia was first reported by Claudius Amyand in 1736. It has an incidence of 1% and complicated by acute appendicitis in 0.08% of case. We report an unusual case of Amyand hernia^[2] occurring in a 60 years old male, who presented with the tender right groin swelling.

Case Report

A 60 years old male presented to the surgical outpatient department of Durgapur Steel Plant Hospital, Durgapur, West Bengal, in India with one-year history of a swelling in right groin and pain since 10 days. The initial diagnosis was an incarcerated indirect inguinal hernia. There were

no bowel symptoms. Examination revealed a tender swelling in right groin. An X-Rays of abdomen was inconclusive.



Fig I: Appendix in Hernialsac



Fig II: Appendix adhered to Hernial Sac

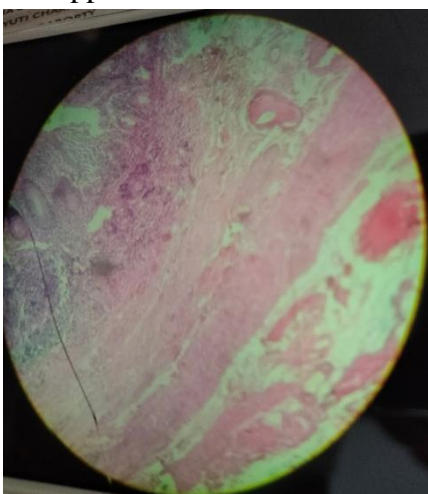


Fig III: Neutrophilic infiltration in wall of Appendix

With right inguinal incision, he underwent herniotomy and herniorrhaphy, inflamed appendix was found in hernial sac with some adhesions to sac (Type II) (**Fig I & II**). A classic appendectomy was done. Histopathology showed an inflamed appendix (**Fig III**). Classification system outlined by Losanoff and Basson, is described in (**Table 1**)

Table 1: Losanoff and Basson

Classification	Description	Surgical management
Type I	Normal appendix within an inguinal hernia	Hernia reduction, mesh repair, appendectomy in young patients
Type II	Acute appendicitis within an inguinal hernia, no abdominal sepsis	Appendectomy through hernia, primary endogenous repair of hernia, no mesh
Type III	Acute appendicitis within an inguinal hernia, abdominal wall or peritoneal sepsis	Laparotomy, appendectomy, primary repair of hernia, no mesh

Type IV	Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology	Manage as types 1 to 3 hernia, investigate or treat second pathology as appropriate
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Discussion

In 1936 Claudius Amyand, surgeon to King George II described and performed first appendectomy, remove the appendix from inguinal hernial sac of an eleven-year-old boy. Since then, it has been given eponymon name Amyand Hernia. Amyand hernia^[2] is a rarity with incidence of an uncomplicated appendix found in the inguinal canal be of 1%, while the finding of appendicitis in the inguinal canal is rarer again with incidence of just 0.8%. It is more common in men and almost exclusively right sided due to the usual anatomical position of appendix. There have been reports of left sided Amyand hernia^[3] and associated with situs- inversus, mobile caecum or intestinal malrotation. (In a review of 18 cases, the median age was 42years with the oldest age noted in literature being 89 years). It is thought that the appendix in hernial sac is more prone to be inflamed as compared to a normal anatomical position of appendix, but it is controversial whether appendicitis is the primary pathological mechanism or the primary event is its herniation, making it more prone to trauma, or coupled with changes in abdominal pressure due to muscles contraction which compresses the appendix, reducing the blood supply, causing bacterial overgrowth and inflammation leading to gangrene, perforation , rupture and abscess formation.

Preoperative clinical diagnosis is practically impossible, but preoperative trans- abdominal USG^[9] and CT scan imaging techniques are useful in establishing the diagnosis early but not routinely used in clinical practices. There are no sensitive or specific reports in the international literature to this particular clinical entity. Our patient had no clinical or biochemical data of compromised bowel so we did not take any radiological imaging^[6]

In the literature controversy exists regarding prophylactic appendectomy and use of mesh during amyand hernia repair. Most of literature recommends that appendectomy is not necessary if appendix is normal without any features of inflammation. Appendix may be reduced and meshoplasty can be performed. In some literature appendectomy is recommended in all cases of Amyand hernia, as they believe that manipulation of appendix during reduction may lead to inflammation and appendicitis.

In all cases of uninflamed Amyand hernia meshoplasty is acceptable. Many believe that meshoplasty in case of inflamed appendix increases the risk of wound infection, sepsis, fistula formation and rejection of mesh, increasing morbidity. Some authors recommend use of newer biological mesh^[8] in cases of inflamed and perforated appendix without any infection. In the literature, extra peritoneal laparoscopic reduction of Amyand hernia^[1,5,10] has also been recommended.

According to Losanoff and Basson classification^[4] sub type 1, may be managed with reduction or appendectomy (considering comorbidities) and meshoplasty. Sub type 2-4, with abnormal appendix, require appendectomy and tissue repair without prosthesis.^[7]

Conclusion

Amyand hernia is extremely rare clinical condition. The patient in this case report were managed on basis of current recommendations in the literatures, in our case patient recovery was excellent with good clinical outcome.

Sources of Support -Nil

Conflict of Interest -Nil

Ethical Approval - Obtained from institutional Head.

Patient consent - Obtained

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