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CASE STUDY OF AMYAND HERNIA AND EXPLORATORY LAPAROTOMY WITH APPNDICECTOMY WITH RT INGUINAL HERNIORRHAPHY

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INTRODUCTION

Amyand's hernia is defined as an inguinal hernia that contains the appendix within the hernia sac. In 1735, C. Amyand first described an 11-year-old boy with an incarcerated inguinal hernia containing a perforated appendix. Subsequently, this type of hernia was named Amyand's hernia, which was rarely encountered in clinical practice. Amyand's hernia occurs in only 1% (0.19–1.7%) of all inguinal hernia cases. Moreover, Amyand's hernia is classified into four subtypes regarding the clinical symptoms and the situation of the appendix. There are no inflammatory changes in the groin of type 1 Amyand's hernia; type 2 Amyand's hernia is those in which the septic changes are confined to the hernia sac; type 3 Amyand's hernia represents a scenario where the sepsis has spread beyond the hernia sac; type 4 Amyand's hernia includes acute appendicitis and other abdominal lesions. The appendix within the hernia can be either normal or inflamed, in which 0.13% of cases have appendicitis. Notably, the perforation of the appendix could lead to a dramatic increase in the mortality rate (15–30%) due to severe abdominal sepsis. Commonly, the diagnosis of Amyand's hernia was made intraoperatively and few cases could be diagnosed before surgery. Besides, current management of Amyand's hernia remains controversial since different strategies should be tailored to different individuals. In this study, we reported six cases of Amyand's hernia and detailed different managements, aiming to provide a reference for the surgical treatment of Amyand's hernia.

Inguinal hernia has no preference for age group or sex; there are cases of Amyand hernia

reported in the range from a neonatal period to 92 years old.[3] It has an incidence that varies from 0.19 to 1.7%[3,14] and is diagnosed during hernioplasty, more commonly in children because of a patent vaginal process.[3]

Appendicitis in this condition has an incidence of 0.07–0.13%, regardless of the stage of presentation. Literature review reports a perforated appendix in 0.1%, with mortality range from 15 to 30% because of severe abdominal sepsis.[3,7,14]

CASE STUDY

A 74 Yrs Male C/O Swelling At Left Inguinal Region And Pain At Swelling Site Since 5 Days. There Is No History Of Fever And Vomiting.

AIM

To Study The Exploratory Laparotomy With Appndicectomy With Rt Inguinal Herniorrhaphy.

OBJECTIVE

To Observe The Surgical And Medical Management Of Amyand Hernia And Exploratory Laparotomy With Appndicectomy With Rt Inguinal Herniorrhaphy.

MATERIAL AND METHODS

Name-Xyz, Age-74 Yrs, Occupation- Retired Gov Servant.

Complaints Of

Swelling At Right Inguinal Hernia And Pain At Swelling Site Since 5 Days.

Past History

S/H/O- NO ANY SURGICAL HISTORY

K/C/O- : No HTN | No DM | No Asthma | No Koch's | No Thyroid Disorder M/H/O- NO ANY MEDICAL HISTORY

Physical Examination

G. C – Fair & AfebrileP -84/min,

BP- 110/60 mmHgCVS –S1S2 N,

CNS- Conscious & OrientedRS- AEBE clear

P/A- Soft & non tender

General Examination

Pallor-NOT SEEN, Icterus– Not seen

Lymphadenopathy-No regional Lymphadenopathy

Local Examination

On inspection- swelling noted at right inguinal region size approx. 5 x 4cm

Shape-spherical

Cough impulse- negative

On Palpation- Tenderness noted at swelling site, local temp raised Consistency- hard, reducibility test- negative.

INVESTIGATIONS

Hb-15.9 gm% , WBC – 12750/cmm, RBC- 5.63mil/cmm PLT – 2.18LAKH /cmm, BSL{ R} - 153 mg / dl,HIV & HBsAg- Negative 2D ECHO

CXR PA VIEWECG

USG (A+P)-

Mild free fluid in RIF. There is a heterogenously hypoechoic lesion measuring 26x30x35mm in right inguinal region. There is anterior defect seen in right inguinal region with herniation of bowel loops.

TREATMENT & MANAGMENT

NBM

INJ-SUPACEF 1.5GM I.V B.D IN 100 ml NS, INJ-METRO 500mg I.V. T.D.S

INJ-PAN 40mg IV BD

I.V. FLUIDS

SURGICAL PROCEDURE

1.Anaesthesia- Spinal

2.Position-Supine

Procedure- Exploratory Laparotomy with With Appndicectomy With Rt Inguinal HerniorrhaphyUnder AAP painting and draping done.

Incision taken from asis to pubic tubercle 1.25 cm above the inguinal ligament.

Layerwise dissection done- skin- campers fascia – external oblique aponeurosis dissected.

A hard mass felt and pus discharge seen. Pus pocket pull out and inflamed appendix found in

sac.

After that midline incision taken over abdomen and layerwise dissection done.

Skin- subcutaneous fascia- rectus abdominis muscle- peritoneum opened- appendix found and mesoappendix ligated and cut- base of appendix transfixed with vicryl 2.0. with the help of scissor flush at the appendix.

An ADK drain no. 28 placed in ileocaecal region and fix with mersilk 2.0

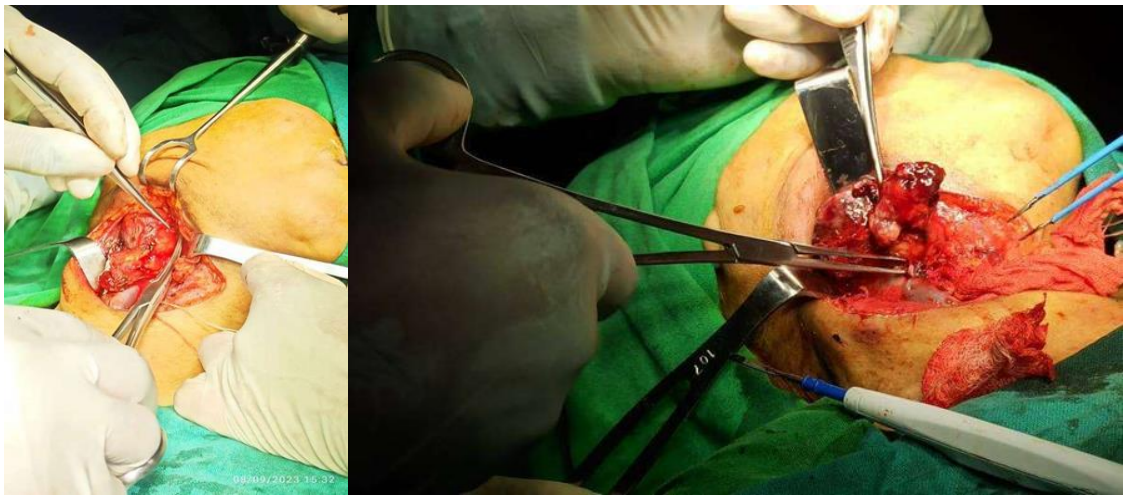
Peritoneum closed with vicryl 2.0 Rectus sheath and rectus abdominis muscle closed with prolene 2.0. subcutaneous fat closed with vicryl 2.0.

Haemostasis achieved.

After that inguinal herniorrhaphy done.

External oblique aponeurosis closed with Vicryl 2.0Layerwise closure done.

Haemostasis achieved. Dressing done with betadine. Patient shifted to ward in good condition.



Procedure- Uneventful.

Blood Loss-30cc.

Instruments Count-Checked.Sponge Count- Checked.

Operation Duration- 2 Hrs.Biopsy- Yes.

Culture- Pus

POST OP

INJ-Supacef 1.5gm IV BD IN 100ml NSINJ-METRO -500 mg IV TDS,

INJ –PAN 40mg IV ODINJ T.T 0.5 CC IM STAT

INJ PARACETAMOL 1 GM IV STAT

INJ-VIT C 2 AMPULE in 100ml NS for three day –

After 10 days ADK drain removed and dressing done healthy granulation seen – After 15 Days stitches removed and patient discharge.

DISCUSSION

myand hernia is most frequently reported in men, and almost exclusively on the right side. There is, however, an exception where the appendix is on the left side: situs inversus, intestinal malrotation, a very loose cecum or a large appendix. In some cases, it can be accompanied by the cecum, bladder, ovarian, fallopian tube, omentum or a Meckel diverticulum.

Appendicitis in this condition remains the same, although the triggering factor can vary from, obstruction to direct trauma over the hernia, both causing a reduced vascular flow, ischemia and infection.[2,3,14]

Pre-operative clinical diagnosis is practically impossible, but has been reported via trans-abdominal ultrasound. The later, a tubular blind-ended structure originated from the cecum wall is observed and extends to the hernia sac during intra operative procedure. A blind-ended noncompressible tubular structure and increased vascularity. There are no sensitivity or specificity 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 image.

In 2007, Losanoff and Basson proposed a classification when facing this rare condition (See table 1). Our patient presented a Nyhus II Amyand type 1 hernia, hence, no resection of

cecal appendix was performed and opted for a micro pore prosthetic polypropylene mesh (Parviz Amid class II).[4–6,10,14,17]

Table 1.

Table 1. Losanoff and Basson Classification.

Type 1	Presentation of normal appendix in inguinal hernia.
Type 2	Presentation of appendicitis in inguinal hernia without evidence of abdominal sepsis
Type 3	Presentation of acute appendicitis in inguinal hernia with data of abdominal sepsis
Type 4	Presentation of acute appendicitis in inguinal hernia with concomitant abdominal pathology

Losanoff and Basson classification of Amyand Hernia.

International literature recommends reducing the hernia content and perform no tension hernia repair.[3,5,6,14,17] If appendectomy is performed, a clean surgery is combined with a clean-contaminated surgery, raising the infection rate and possible infection of prosthetic material.[3,14] This statement changes in the pediatric population, and in a left side Amyand hernia, in which appendectomy does not difficult inguinal repair.[4–6,10]

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 as well as possible fistulae formation from the appendicular stump. In these cases, in addition to appendectomy, a Shouldice technique should be consider because of its lower recurrence rate[7,8], this will depend on the surgeon's decision, experience and domain over tension inguinal hernia repair techniques.

With the new prosthetic materials such as biological mesh, current surgical approach in Amyand type 2 hernias suggests its use to prevent recurrence. There are very few cases reports in the international literature so future research will focus on proving its efficacy; a disadvantage is that it is not available in all hospital settings.[11]

4. CONCLUSIONS

Amyand hernia is a rare condition and represents two of the most common diseases a general surgeon has to face (hernia and appendicitis). Management involves a laborious surgical technique, and its definitive treatment will depend on the surgeon's experience and clinical scenario. Seven years ago, standardization of treatment for this clinical entity began with Losanoff and Basson, although more prospective trials are needed to validate their classification.[6] and the modified version of Rikki.[17]

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. More studies are required about preoperative diagnosis utility of both. It is important to emphasize that no delay in definitive treatment is allowed because consequences can be disastrous.

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