CASE REPORT

Amyand Hernia-A rare Entity

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Received:
18th February 2017

Accepted:
23rd October 2017

Abstract:
Inguinal hernia is the commenst in both male and female gender. other commons hernias are umblical hernia, epigastric hernia, femoral hernia and incisional hernia. Among the rare hernias are Lumbar hernia, Spigelian hernia, Obturator hernia.
Inguinal hernia can be direct and indirect. it is for the divided into irreduceable inguinal hernia, obstructed inguinal hernia, incarcinated inguinal hernia, strangulated hernia.
Amyand hernia is a uncommon type of inguinal hernia in which the content of the hernia sac is a vermiform appendix. It is observed in less than 1% of inguinal hernia. Its presentation is usually of an inguinal swelling. We present a case of a young male who presented with findings of an obstructed hernia. Perioperatively on observing this rare entity, an Amyand Hernia, an appendicectomy along with hernioplasty was performed.

Keywords: Amyand Hernia, Inguinal Hernia, Vermiform Appendix, Hernial sac

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Introduction:
In assessment of inguinal scrotal swellings, inguinal hernia is the most commonly encountered pathology. They usually contain omentum, small or large bowel as their contents. Although rarely there might be other viscera as contents of the hernia sac, presence of the vermiform appendix in the hernia sac is a rare entity. It is termed as an "Amyand hernia"[1,2] Surgical management comprising of exploration, herniotomy, appendicectomy and repair of hernia is done usually following the Losanoff and Basson classification. This classification was proposed in 2007.[1-4]

The Amyand's hernia is entitled after Claudius Amyand, who, on December 6, 1735, performed an appendectomy during the treatment of an 11-year-old boy who presented with a right inguinal herniation. It is a rare condition reported in 1% cases of inguinal hernia repair. Acute appendicitis within an inguinal hernia accounts for 0.13% of all cases. The appendix, in the hernia sac may be inflamed, infected or even perforated.[5-7]

Case report:
A 40-year-old, Muslim, male, married, labourer by profession with no known co-morbids, presented in the emergency with complaint of a swelling in the right inguinal region for the past three months, which had become ir-reducible for the past one day and was now associated with pain. He also had several episodes of vomiting and unable to pass stool for the past 1 day. Clinically, he was tachycardic, rest of the vitals were stable when received. His abdomen was distended with mild tenderness all over the abdomen. Inguinal examination revealed an irreducible lump in the right groin with overlying shiny, erythematous skin. Cough impulse was equivocal. Swelling was warm and tender. We could not get above the swelling, but the testis was palpable separately. Baseline investigations done which were all within normal range. Abdominal X-ray, supine view showed distended small bowel loops. A provisional diagnosis of

Figure-1: A case of Amyand hernia appendix is clearly seen in the picture along with caecum.

strangulated inguinal hernia was made.

After resuscitation, informed consent was taken and exploration of the strangulated inguinal hernia was planned. Per-operatively, inguinal region was approached through right groin incision with J-shaped extension of the incision. On exploring the hernia sac, 20cc dirty fluid along with a gangrenous appendix, along with 1 feet viable ileum and cecum was observed. Appendix had a gangrenous tip and body along with a healthy base. A conventional appendectomy was done through the right groin incision along with Shouldice repair.

Outcome and follow-up: Patient's post-operative recovery was uneventful. He was discharged on the third post-operative day and followed up on the 12th post-operative day in the OPD for removal of sutures.

Discussion:

An Amyand Hernia is a difficult surgical condition in which two surgical pathologies may co-exist, inguinal hernia and appendicitis. A pre-operative diagnosis is usually not possible as the clinical scenario is masking the symptoms of acute appendicitis.

As quoted by Burkhardt JH et al in his study, stated computed tomography (CT) as the most common and reliable imaging modality for assessment of acute abdomen and abdominal hernias.[8] However, globally inguinal hernias are usually diagnosed clinically and treated without any elaborate imaging. Similarly, in our case to a simple X-ray abdomen and ultrasound of the swelling was performed which did not pre-empt the condition. Ultrasonography could be a helpful imaging modality for Amyand's hernia, being cheaper and safer but it is heavily dependent upon the technical skill of the operator, and therefore remains a relatively unreliable modality. Hence CT imaging is often for the purpose of ruling out a more serious pathology. The clinical presentation of pain in such cases is not necessarily attributed to appendicitis always.[9]

The appendix is not a completely useless organ as it may also be useful in the future for urinary diversion, anti-grade bowel enemas, or biliary tract reconstruction. Therefore un necessary removal should be avoided. Similar was stated by Singal R in his case report[9] and similarly an intra operative finding of a normal appendix does not always makes it mandatory to carry out an appendicectomy. Some surgeons defy this and persistently emphasize on an appendectomy. The Losanoff and Basson classification does provide an adequate guideline for this dilemma. Our case was coinciding the type-2 Amyand hernia category. A potential patho-physiological process was proposed by Ofili et al, who suggested that mere manipulation of a healthy appendix during surgery may initiate inflammation and may lead to secondary appendicitis.[10,11]

Recommendations are reducing the hernia contents and perform no tension hernia repair.[2,3,7,9,12] A clean surgery, hernioplasty is combined with a clean contaminated surgery, like appendicectomy increasing the chances of infection and possible infection of prosthetic material.[3,39] In the cases where an inflamed, suppurative or perforated appendicitis were observed per-operatively, no prosthetics material should be used because of the increased risk of surgical site infection. In these cases, in addition to appendectomy, a Shouldice technique should be consider because of its lower recurrence rate.[13,14] Similarly in the presence of gangrene of the appendicular tip and body, although a healthy base and caecum, a simple appendicectomy along with Shouldice repair was carried out by our

surgical team. A prosthetic Mesh was avoided. Recent prosthetic materials such as biological mesh, can be placed in Amyand type 2 hernias to prevent recurrence, but it's not easily available widely.[11,13-16]

Conclusion:

Amyand Hernia is a rare condition reported in 1% cases of inguinal hernia repair. Acute appendicitis within an inguinal hernia accounts for 0.13% of all cases. Inflammation of the appendix is attributed to external compression of the appendix at the neck of the hernia. The inflammatory status of the appendix determines the surgical approach and the type of hernia repair. The Losanoff and Basson classification can serve as an aid in the management. All surgeons should be aware of anatomical variations of inguinal hernia, such incidental findings and their management.

Conflict of interest: None

Funding source: None

Role and contribution of authors:

Dr Javeria Iftikhar, case reporting and writing, and assistant to the surgeon.

Dr Zuhera, case reporting and writing

Dr Syed Shafqatullah, operating surgeon review the article critically and gave useful advise

Dr Rabbia Zubair Farhan, critically review the article and edited the article where required.

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