Acta Scientific Clinical Case Reports

Volume 1 Issue 10 November 2020

Case Report

Inguinal Hernia or Pandoras Box?

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Received: October 12, 2020

Published: October 28, 2020

Abstract

Inguinal hernia with an appendix trapped in it is called an Amyands hernia. The overall incidence of Amyands hernia is only around 1 %. Most dreaded complications of this type of hernia is incarceration or perforation. Inguinal and femoral hernias are more prone for Incarceration of the appendix. In this case review we present to you a Amyands hernia with a caecal diverticula with associated complications with Inguinal hernia.

Keywords: Inguinal; Hernia; Appendicitis; Caecal Diverticula; Perforation

Introduction and Case Report

A 56-year-old man presented with a reducible mass in the right groin for 20 years which has become irreducible since 1 month. Patient also complains of pain over the mass. Physical examination yielded a mass measuring 12 cm × 12 cm in the right inguinal region; the mass was tender, soft, and had a smooth surface. The mass was seen extending into the scrotum. Cough impulse was positive probably due to a wide deep ring. No redness or signs of inflammation were detected. The body mass index of patient is 23 (kg/m^2), and he had no history of appendicitis.

Preoperative color Doppler ultrasound of both inguinal regions indicating a low-echo zone of 10 cm × 10 cm in the right inguinal region the patient was diagnosed with right inguinal hernia with omentum as content.

Since there was no ambiguity with the content of the hernia and a high creatinine content due to patients Acute on Chronic Kidney disease, a CT scan was deferred.

Informed consent for surgical treatment was obtained from the patient and his relatives.

History

Claudius Amyand, on December 6, 1735, performed the first successful appendectomy for a 11-year-old boy who presented with a right inguinal hernia. The term Amyand's hernia refers to an Incarcerated hernia containing appendix, which may be normal or inflamed [1]. Amyand found a pin encrusted with stone within the appendix; the hernial sac contained the appendix [6]. Since this is a rare condition, the term "Amyand's hernia" been used as a description of an incarcerated appendix within an inguinal hernia [2].

Literature Review and Discussion

Amyand's hernia is death with appendectomy via herniotomy, with primary hernia repair [4,6,9]. In cases of suspected perforation or pelvic abscess a lower midline laparotomy is recommended [3,12]. Extraperitoneal management of Amyand's hernia has become more common [5].

Literature review showed no consensus regarding the best course of action in treating an appendix in Amyand's hernia. There is often confusion on weather or no to do an appendicectomy in a Amyand's hernia. Appendectomy is indicated only if the appendix is inflamed [8,10,11] by a few, others support appendectomy even when the appendix is non-inflamed, in an effort to avoid future complications [8,10,11,13]. Manipulation of a healthy appendix during surgery may incite inflammation and may provoke secondary appendicitis [13].

Most often, hernia repair is completed during primary surgery. In a few cases, hernia repair is delayed due to complications and

inflammation [4]. Closure of contaminated abdominal wall defects is generally contraindicated because prosthetic mesh material can elicit an increased inflammatory response [3,7].

Losanoff., *et al*. proposed a classification of Amyand's hernia to improve treatment:

- Type I is a normal appendix: perform reduction or appendectomy with mesh hernioplasty [14].
- Type II is acute appendicitis localized in a hernial sac: perform appendectomy through hernia, with mesh hernia repair; associated with higher risk of mesh infection.
- Type III is acute appendicitis complicated by peritonitis: perform appendectomy through laparotomy; hernioplasty decision should be made based upon the spread of sepsis.
- Type IV is acute appendicitis accompanied by other abnormal pathology: hernioplasty may be contraindicated if damage is too extensive.

Operative procedure

He underwent an elective Bassinis hernia repair only avoiding mesh placement under spinal block.

Once the external oblique was opened the cord structures were identified and the contents were dissected off the cord structures.

The hernia contained perforated appendix attached to a perforated caecal diverticula along with the ileal loops as seen in figure 1. The posterior wall of inguinal canal was damaged as seen in figure 2 and the transversalis fascia was missing, making it a Type IIIb hernia according to Nyhus.

Perforated appendicular tip.

Perforated caecum with appendicular stump post appendicectomy.

Perforated caecum.

Linear Stapler 55 being applied to perforated caecum.

Post Stapler application.

Bassin's repair with Ethibond 2-0.

(Figure 1 and 2)

The sac was separated and contained mesangial tissues. The sac wall was continuously isolated until the right lower abdomen. The sac wall (length, 10 cm) was found as the mesoappendix, with a perforated appendix as hernia content.

After incision protection, the sac wall was cut, and appendectomy was performed. Perforated caecal diverticula was closed using a Linear stapler 55 with blue cartridge. The sac was sutured with 2-0 absorbable polyglactin 910 and replaced into the preperitoneal space after excess removal of the adherent omentum.

Testis was found to be atrophic and an orchidectomy was performed using 2-0 absorbable polyglactin 910 and ligated at the deep ring.

Bassini repair was performed; Ethibond 2-0 sutures were used to suture the conjoint tendon to the lowest fibres of the inguinal ligament. After external oblique aponeurosis closure using the No. 2-0 absorbable Polygalactin 910. Skin was closed with ethilon 2-0.

Histopathologic examination of the appendix showed acute suppurative appendicitis with perforation caecum showed typhlitis with perforation.

The patient was administered cephalosporins (2.0g, twice daily) for three days; recovery was uneventful.

We let him stay in bed for 3 days, to ensure the solid suture of Bassini herniorrhaphy, supplemented with anticoagulation therapy (lower limbs pressure therapy) to prevent lower limbs deep venous thrombosis.

At the 5th day after surgery, we started orally and discharged the patient on 7th post-operative day after he could tolerate food well.

Conclusion

Amyands hernia is a clinical entity which has been reported very rarely. Its association with Typhlitis and caecal perforation has not been reported in the literature. Pre-operative diagnosis of these conditions are very difficult and impossible to confirm with Ultrasound. Hence a CT Scan with contrast is advisable in these conditions. Intra operative decision making in such conditions is of almost importance. Such cases have to be dealt with at a tertiary care centre with highly qualified surgical staff.

Declaration of Patient Consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial Support and Sponsorship

Nil.

Conflicts of Interest

There are no conflicts of interest.

Bibliography

1. Ali SM., *et al.* "Amyand's hernia: study of four cases and literature review". *SQU Medical Journal* 12 (2012): 232-236.

2. Hiatt JR and Hiatt N. "Amyand's hernia [Letter to the Editor]". *The New England Journal of Medicine* 318 (1988): 1402.

3. Sharma H., *et al.* "Amyand's hernia: a report of 18 consecutive patients over a 15-year period". *Hernia* 11 (2007): 31-35.

4. Lyass S., *et al.* "Perforated appendicitis within an inguinal hernia: Case report and review of the literature". *The American Journal of Gastroenterology* 92 (1997): 700-702.

5. Sarker SK and Jackson K. "Laparoscopic extraperitoneal repair of Amyand's inguinal hernia". *Journal of the Society of Laparoscopic and Robotic Surgeons* 10 (2006): 528-530.

6. Ash L., *et al.* "Amyand's hernia: a case report of prospective CT diagnosis in the emergency department". *Emergency Radiology* 11 (2005): 231-232.

7. Johari HG., *et al.* "Left-sided Amyand hernia". *Annals of Saudi Medicine* 4 (2009): 321-322.

8. Cankorkmaz L., *et al.* "Amyand's hernia in the children: a single center experience". *Surgery* 147 (2010): 140-143.

9. Inan I., *et al.* "Amyand's hernia: 10 years' experience". *Surgeon* 7 (2009): 198-202.

10. Burgess P., *et al.* "Amyand hernia repaired with Bio-A: a case report and review". *The Journal of Surgical Education* 68 (2001): 62-66.

11. Singal R., *et al.* "An incarcerated appendix: report of three cases and a review of the literature". *Hernia* 16 (2012): 91-97.

12. Solecki R., *et al.* "Amyand's hernia: a report of two cases". *Hernia* 7 (2003): 50-51.

13. Upadhyaya VD., *et al.* "Amyand's hernia in infant: A rare entity". *Kathmandu University Medical Journal* 7 (2009): 143-144.

14. Losanoff JE and Basson MD. "Amyand hernia: What lies beneath - a proposed classification scheme to determine management". *The American Journal of Surgery* 73 (2007): 1288-1290.