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CASE REPORT

AMYAND HERNIA: CASE REPORT AND REVIEW OF THE LITERATURE

[1, 2, *]Pazooki, D., [2]Nakhaei, R., [1]Lundgren, J., [1]Granhed, H., [1]Zeratiyan, S., [1]Hosseini, M., [2]Haghighikian, M., [1]Mousavie, S. H., [1]Negahi, A.R., [2]Majdsepas, H., [2]Hosseini Sh, K., [2]Ghaed, M.A. and [3]Akyürek, L.M.

[1]Department of Surgery, Sahlgrenska University Hospital, Gothenburg Sweden
[2]Department of Surgery and Cardiovascular & Thoracic surgery, Hazrat Rasol Akrm Hospital, Iran University, Tehran Iran
[3]Department of Clinical Pathology and Genetics, Sahlgrenska University Hospital, Gothenburg, Sweden

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ABSTRACT

The presence of an appendix in a hernias sac (Amyand's hernia) is a rare entity and the incidence of having an appendix in the hernias sac is less than 1%. Usually, the appendix has been shown to be a part of a sliding hernia and it may be adherent to the sac, most commonly to the mesoappendix rather than the appendix itself and it makes up all or some part of the postero-medial wall of a hernias sac. The clinical presentation varies, depending on the extent of inflammation in the hernia sac and the presence or absence of peritoneal contamination. The presence of vermiform appendix, whether normal or inflamed in the inguinal hernia, is referred to as Amyand's hernia. This is rare occurring in about 1% of inguinal hernias in adults.1 This is a report of Amyand's hernia, which presented as an immediate resistance in the right groin with mild redness in an 80 year old male patient. Appendicectomy followed by hernia repair. Emphasis is given to the rarity of the disease and to the review of the literature.

INTRODUCTION

Incidence of occurrence of the normal appendix within inguinal hernia sac is 1% and that of an inflamed appendix is 0.1% (Lyss *et al.,* 1997). It was first described by Claudius Amyand (1685-1740) (Sharma *et al.,* 2007; Milanchi and Allins, 2008). Claudius Amyand, surgeon to King George II of Britain, performed the first recorded appendectomy in 1735. The patient was an 11-year-old boy who had perforation of the appendix by a pin. In the early 1900s, this precedent was recognized and the condition was given the eponym Amyand's hernia (Sharma *et al.,* 2007; Milanchi and Allins, 2008). D'Alia observed once (0, 08%) in 1.341 inguinal herniaoperations (D'Alia *et al.,* 2003) while Ryan (Ryan, 1937) in 1937 reported only 11 cases of appendicitis out of 8.692 (0,13%) external hernia sacs. Amyand Hernia is a rare disease seen in approximately 1% of all hernias, complications of it, like acute appendicitis, or perforated appendicitis. Its diagnosis is very difficult in the pre-operative period; it is usually an incidental finding. Amyand's hernia is a rare presentation of inguinal hernia, in which the appendix is present within the hernia sac. This entity is a diagnostic challenge due to its rarity and vague clinical presentation. The term Amyand's hernia signifies presence of the appendix, either inflamed or normal, in the inguinal hernia. It is a rare entity.

Presentation of case

We describes the case of an 80-old male patient, which was presented to the outpatient clinic of surgery with an incarcerated right side inguinal hernia without any signs of ischemic complications. In remission due to high-sided low-lying abdominal pain. Congenital single kidney, hypertension, diet therapy DMII, COPD, AF. Admitted -13/June 2015 due to brain abscess in turn due. Suspected endocarditis. Cholecystectomy-2006Immediate resistance in the right groin with mild redness. Replacement of hernia in emergency fails. Ultrasound shows hernia containing fat and liquid.CRP 110. The abdomen was soft. The day after, CRP 150. Crepitation on auscultation and obstruction on the lungs. Lung X-ray

***Corresponding author:* [1, 2]Pazooki, D.,**
[1]Department of Surgery, Sahlgrenska University Hospital, Gothenburg Sweden.
[2]Department of Surgery and Cardiovascular & Thoracic surgery, Hazrat Rasol Akrm Hospital, Iran University, Tehran Iran.

Burning feeling and hydrocele right groin. The patient is notified for surgery, spinal anesthesia at first. Incision in the right groin. Lateral hernia sac 4x8 cm are identified and opened. Empty smelly smothered pus. Distal hernia sac identified a hard pedicle. Unclear anatomy and lower middle line cut. In line with the ileocecal pool, you cannot luxuriate. Appendicitis tip passed through the hernia ring, Gangrenous and perforated. Appendectomy then herniotomy and herniorrhaphy with polysorb according to Shouldice.

Develops postoperative sepsis and renal failure.

Accepted to CIVA. Right heart failure and suspicion of lung embolism.

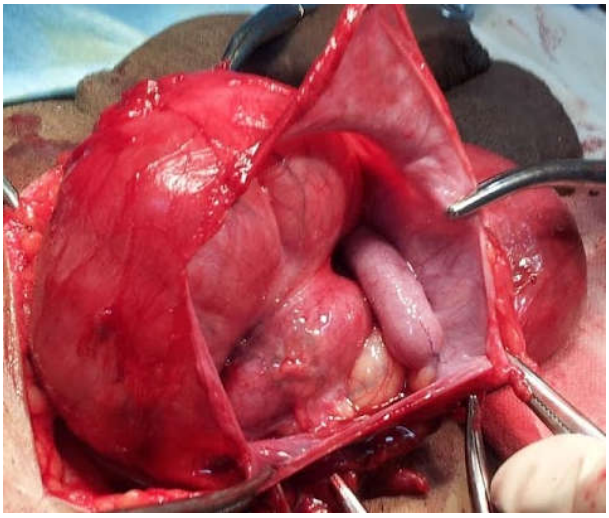

Fig. 1. Amyand's Hernia

From: General Surgery Clinics a Surgeon's Blog

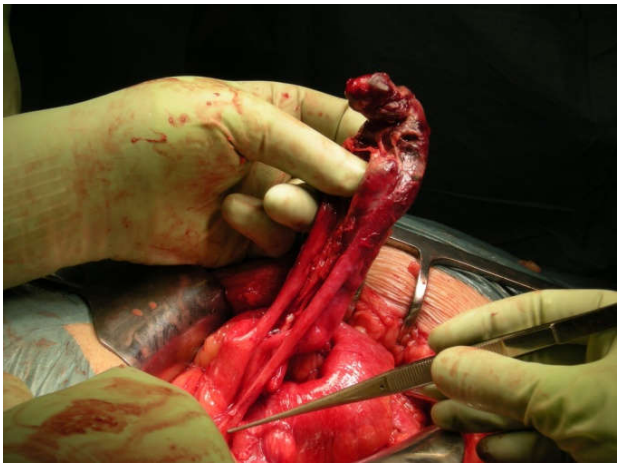

Fig. 2. Appendicitis tip passed through the hernia ring, Gangrenous and perforated

DISCUSSSION

This disease represents a very challenging diagnosis. Amyand's hernia is three times more common in children than in adults, due to the patency of the processus vaginalis (Baldassarre *et al.,* 2009). D'Alia *et al*. scrutinized 1341 inguinal hernias and reported that the incidence of Amyand's hernia was 0.6%,always occurs on the right side, and was found exclusively in males (D'Alia *et al.,* 2003). He also reported mortality of 14-30%, which was primarily due to peritonitis. The mortality can be minimized by early diagnosis and good perioperative care as reported by Sharma *et al*. 2007.

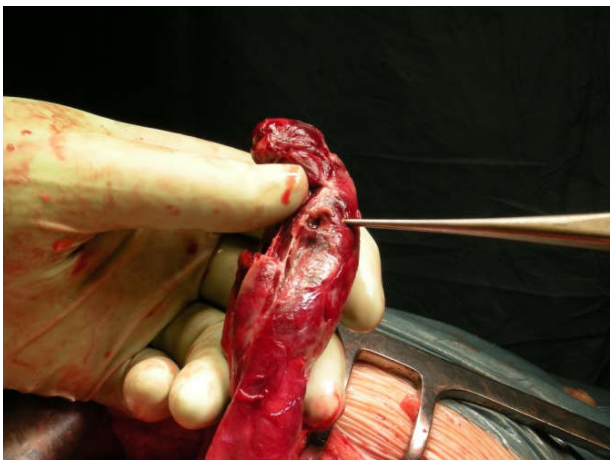

Fig. 3. Appendicitis, Gangrenous and perforated

Definitive preoperative diagnosis poses a challenge due to indistinct clinical signs and symptoms. Incarcerated or inflamed appendix is often misdiagnosed as a strangulated hernia. Diagnosis of Amyand's hernia remains primarily an incidental finding during surgery (Sharma *et al*., 2007). Acute appendicitis in a hernial sac is rarely diagnosed preoperatively and is often misdiagnosed as either testicular torsion or epididymo-orchitis, although CT scan of the abdomen may be help in reaching the correct diagnosis. Most of the cases have been diagnosed intra-operatively after opening the hernial sac. Only asingle report of a pre-operative diagnosis exists (Logan and Nottingham, 2001). The treatment is Appendicectomy with primary hernia repair. Controversy exists regarding Appendicectomy in an Amyand's hernia which involves a non-inflamed appendix. Various guidelines have been proposed (Fisher and Ross, 1990), but the risk of wound infection and subsequent recurrence of the hernia remains a cause of concern if the appendix is removed (Fisher and Ross, 1990). CT scan can aid in making preoperative diagnosis of Amyand's hernia (Vermillion *et al.,* 1999). Saggar *et al*. reported total extra peritoneal management, including appendectomy and hernioplasty using synthetic mesh (Saggar *et al.,* 2004). The use of mesh for hernia repair in a contaminated wound is open for debate. Losanoff described the management of Amyand's hernia. Losanoff's type I hernia (normal appendix within sac) should be managed by hernioplasty without Appendicectomy. Losanoff's types II-IV hernia (acute appendicitis within the sac) requires appendectomy, followed by hernia repair without prosthesis (Losanoff and Basson, 2007). Laparoscopic repair has also been described in pediatric age group (Tycast *et al.,* 2008; Rehman *et al.,* 2010). Rehman *et al*. reported that laparoscopic surgery is feasible for Amyand's hernia repair even in an 8 weeks old infant (Rehman *et al.,* 2010).

Conclusion

Amyand hernia is a rare condition, which represents two of the most common diseases a general surgeon has to face. Appendicitis within an Amyand's hernia is rare, and when it occurs it is usually misdiagnosed as strangulated inguinal

hernia which also represents a surgical emergency. Standardization of treatment is still ongoing and more prospective studies need to be done. This case demonstrates that this pathology must remain in the mind of the surgeons especially in the event of a strangulated hernia and offer a comprehensive review. The proper treatment should involve appendectomy through the herniotomy with primary hernia repair without the use of any synthetic mesh.

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