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Direttore Nicola Picardi

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A case report and review of the literature

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Ivan Barillaro, Micol Sole Di Patrizi, Andrea Boccolini, Stefano Avenia, Andrea Polistena, Michele Cerroni, Alessandro Sanguinetti, Roberta Lucchini, Nicola Avenia

University of Perugia, Medical School, General and Endocrin Surgery Unit, "S. Maria" University Hospital, (Head Prof N. Avenia), Terni, Italy

A Rare case of Amyand's hernia in a 67-year-old male. Case report and review of the literature

AIM: *The aim of the study is to indicate the Amyand's hernia as a possible complication during surgery for hernia repair performed in emergency*
CASE REPORT*: A case Amyand's hernia complicated by the presence of acute gangrenous appendicitis perforated at the base is reported.*
DISCUSSION*: Amyand's hernia is an hernia which is the vermiform appendix inside. This condition may remain asymptomatic and behave like a normal inguinal hernia or can simulate strangulated hernia when the hernia contains inflamed appendix.*
CONCLUSION: *Acute appendicitis in an incarcerated inguinal hernia is a rare event. The preoperative diagnosis is very difficult because it simulates the behavior of a strangulated inguinal hernia. The treatment depends on the severity of appendicitis. The appendicitis status influences the type of surgery and the type of access.*

KEY WORDS: Amyand's hernia, Appendicitis in inguinal hernia, Complicated inguinal hernia

Introduction

The condition in which an inguinal hernia sac contains inside the vermiform appendix is called Amyand's hernia. This rare hernia was described, for the first time,in 1735 by the French surgeon Claudius Amyand in a child of 11 years old. [1]
Usually is represented by a right inguinal hernia, even if in the literature are described cases in which, for abnormal laxity of the cecum, for intestinal malrotation or to a situsinversusviscerum, is located in the left inguinal site [2-4]. Amyand's hernia can be diagnosed at any age (with a peak around the fourth decade) and in both sexes, although males are more affected than females.
It is estimated that is present in less than 1% of the cases of inguinal hernia in the adult [5]. The incidence of this disease is not clear because some femoral hernias containing the vermiform appendix are classified by some authors variants Amyand's hernia, while others consider it a separate entity called Garengeot's hernia [6-8]. Here is reported a Aymand's hernia complicated by perforated acute appendicitis at the base which has resulted in a change in surgical approach.

Case Report

67 years old male patient came to our observation for abdominal pain and right inguinal hernia clogged. The

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Correspondence to: Ivan Barillaro, MD, Via Gabelletta 134, 05100 Terni, Italy (E-mail: ivanbarillaro@gmail.com)

patient reported a history of suprarenal abdominal aortic aneurysm and thrombosis of the superior mesenteric artery.
He reported the appearance of a mass in the right inguinoscrotal region for around six month without pain. One days previously he had begun to experience epigastric pain with nausea and vomiting.
A physical examination revealed a heart rate of 90bpm, a respiratory rate of 21 ipm, PA=140x90 mmHg and an inguinoscrotal hernia on the right side with slight irritation of the peritoneum. The blood tests showed leukocytosis 15490/mm^3 (normal range 4500-10800 mm^3), body temperature was 37.8°C .
The patient underwent ultrasound examination which showed abundant intestinal bloating without presence of free fluid in peritoneal cavity. The X-ray examination abdomen showed air-fluid levels without presence of free air below the diaphragm. The patient was immediately underwent surgery for inguinal hernia repair with inguinal right access. Opening has detected an acute gangrenous appendicitis perforated at the base (Fig. 1).
For this reason it was necessary change surgical approach in right pararectal incision and the execution of an appendectomy with resection of the cecum and packaging of ileum ascending side anastomoses. It has therefore to right inguinal hernia repair with Postempski technique for the septic state of the patient. The hospital stay was smooth, the patient was discharged on postoperative 6 day.

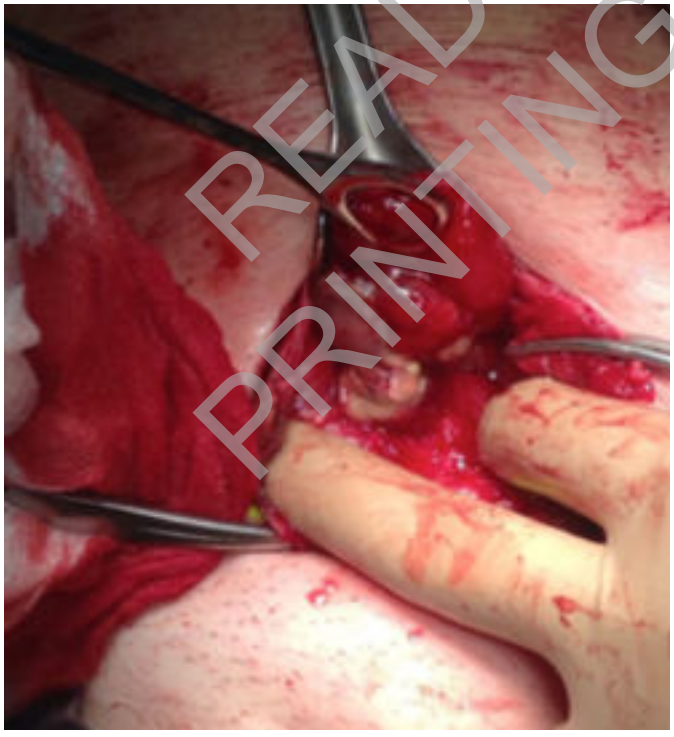

Fig. 1: Acute appendicitis in Amyand's Hernia.

Discussion

Amyand's hernia is a very rare condition. According to some case studies about 1% of all inguinal hernias in adults contains a normal appendix and only in 0.1% of cases the appendix is complicated (inflammation or perforation) [5].
The pathogenesis of complications is not clear. According to some authors inflammation lead to edema and formation of adhesions resulting in incarceration of the appendix, ischaemia and bacterial growth; according to others, the contraction of the muscles of the abdominal wall would cause a sudden increase in intra-abdominal pressure with incarceration of the appendix and subsequent inflammation and bacterial proliferation [9-12].
The clinical picture varies depending on the extent of the inflammation of the appendix and the presence or absence of peritoneal inflammation. It is usually comparable to that of an inguinal hernia incarcerated or strangulated (painful swelling in the groin and cannot be reduced, which may be associated with fever and leukocytosis). The appendiceal inflammation may be confined in the sac or extend to the peritoneal cavity in cases of perforation of appendix same. Rarely there may be an extension of the inflammatory process to the skin and overlying soft tissue, thus constituting a framework of necrotizing fasciitis, burdened with a high mortality rate [13,14]. Amyand's hernia enter into the differential diagnosis of inguinal hernia complicated, the omentocele complicated, Richter's hernia, testicular torsion, acute bleeding testicular cancer, acute hydrocele, acute epididymitis, the lymphadenitis groin. The surgical treatment varies depending on the situation: in the cases of normal appendix in children and young adults in fact, it is recommended the use of hernioplasty with prosthesis associated with appendicetomy. Faced with an inflamed appendix or perforated appendectomylaparotmy access and not prosthetics plastic is the best treatment for this type of pathology. The mortality rate varies in different series from 14% to 30% and is closely linked to the spread of inflammation in the peritoneal cavity [15,16].

Conclusion

Acute appendicitis in an incarcerated inguinal hernia is a rare event. The preoperative diagnosis is very difficult because it simulates the behavior of a strangulated inguinal hernia.
The diagnosis Amyand's hernia is radiological (CT) or more often intraoperative, because routinely TC not be performed in the presence of a clinical picture suggestive for inguinal hernia complicated.
The treatment depends on the severity of appendicitis. The presence of acute appendicitis, is always followed by appendectomy and not prosthetic plastic inguinal hernia repair for inguinal or midline access.

Riassunto

OBIETTIVO: Lo scopo dello studio è quello di indicare l'ernia di Amyand come una rara variante che può complicare la procedura chirurgica durante un intervento di ernioplastica eseguito in regime di urgenza.
CASO CLINICO: Riportiamo un caso di ernia di Amyand, complicata da appendicite acuta gangrenosa perforata alla base. È stato praticato un intervento chirurgico con conversione da inguinotomia ad accesso pararettale destro per la gravità della peritonite.
DISCUSSIONE: L'ernia di Amyand è un ernia contenente l'appendice vermiforme. È una condizione che può rimanere asintomatica o nel caso di appendicite acuta simulare un ernia inguinale strozzata quando è presente un appendicite acuta.
CONCLUSIONI: L'appendicite acuta incarcerata in un ernia inguinale è un evento raro. La diagnosi pre-operatoria è radiologica o come spesso accade intraoperatoria. Il corretto trattamento chirurgico dipende dalla severità dell'appendicite.

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