Amyand's Hernia: A Case of an Unusual Inguinal Herniace

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Received: 13 January 2013 / Accepted: 16 January 2013 / Published online: 27 January 2013
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Abstract An inguinal hernia containing appendix is termed an Amyand's hernia. It is an uncommon and rare condition estimated to be found in approximately 1 % of adult inguinal hernia repairs. Depending on the extent of inflammation in the hernia sac and obstruction of hernia, clinical presentation can vary. We report a case of Amyand's hernia in a 22-year-old male who presented with history of right inguinal hernia for 6 months duration. Operation revealed hernia sac containing inflamed appendix hence appendectomy was performed.

Keywords Amyand's hernia · Appendicectomy · Appendicitis

Introduction

The presence of the vermiform appendix within an inguinal hernia was first described by Claudius Amyand in 1736 [1]. It has an incidence of 1 % and is complicated by acute appendicitis in 0.08 % of cases. We report a case of Amyand's hernia occurring in a 22-year-old man, who presented with a tender, right inguinal swelling.

Inguinal hernia repair is one of the most common operations in surgical practice. Despite that, hernias often pose technical dilemmas, even for the experienced surgeon. The surgeon may encounter unusual findings, such as a vermiform appendix partly or fully contained in the hernia sac,

inflamed or non-inflamed, stretched or curved, and adhered or not adhered to the sac walls. Whether or not an appendectomy should be performed at the same times as the hernia repair is debatable. The aim of this study is to present the experience of our university surgical department with Amyand's hernias.

Case Report

A 22-year-old man, suffering from a pain in the right inguinal area, was referred to the general surgery department. The patient had a 2-day history of epigastric pain first and suprapubic pain later and a protrusion of part of the contents of the abdomen through the right inguinal region of the abdominal wall. On the second day, the hernia had increased in size, whereas the pain had intensified and had localized to the right inguinal area. Physical examination on admission revealed a tender erythematous and nonreducible mass (Fig. 1). Routine laboratory investigation, included blood test analysis and abdominal radiograph, was normal. The diagnosis inflamed irreducible right inguinal hernia was established and the patient was scheduled for surgery.

At surgery, an inflammatory and edematous mass was found inside the inguinal canal. This mass was identified as the tip, body of the appendix, and caecum which adhered to the indirect hernia sac (Fig. 2). A small amount of clear fluid was noted in the peritoneum. The base of the appendix was free of inflammation, so appendectomy was performed and the posterior wall of the inguinal canal was repaired, and after the excision part of the sac, Bassini repair was done. A vacuum drainage was left in place and it was removed on second

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Fig. 1 Erythematous and nonreducible mass in right inguinal region

postoperative day. The patient was given intravenously cefoxitin 3 g daily for 3 days. The postoperative course was uneventful, and the patient was discharged in good condition within 10 days.

Discussion

Acute appendicitis within an inguinal hernia accounts for 0.1 % of all cases [1–3]. Inflammation of the appendix is attributed to external compression of the appendix at the neck of the hernia. The inflammatory status of the vermiform appendix determines the surgical approach and the type of hernia repair. All surgeons agree that if appendicitis exists, the repair of the hernia should be performed with Bassini or Shouldice techniques, without making use of synthetic

meshes or plugs within the defect due to the high risk of suppuration of such materials [2]. Table 1 shows the classification of Amyand's hernias after Losanoff and Basson [4, 5].

In the case of a normal appendix, incidentally found within the hernia sac, the performance of a prophylactic appendectomy along with the hernia repair is not favored by many authors [4, 5]. Appendectomy adds the risk of infection to an otherwise clean procedure. Superficial wound infection increases morbidity, and deep infection may contribute to hernia recurrence. In addition, surgical manipulation to achieve visualization of the entire appendix and its base, by enlarging the hernial defect or distending the neck of the hernial sac, increases the possibility of recurrence by weakening the anatomic structures around the defect [2, 3, 5]. There are authors who recommend reduction of the appendix and mesh hernioplasty if there is no acute appendicitis and appendectomy followed by endogenous hernia repair if an inflamed appendix is found [3, 5, 6]. Although these general rules are certainly acceptable, there are more clinical scenarios to keep in mind. Losanoff and Basson have distinguished four basic types of Amyand's hernias, which should be treated differently (see Table 1 for classification) [4, 5].

Conclusion

In conclusion, a hernia surgeon may encounter unexpected intraoperative findings, such as Amyand's hernia. The decision as to whether one should perform a simultaneous appendectomy and hernia repair is multifactorial. It is important to be aware of all clinical settings and an appropriate and individualized approach should be applied.

Fig. 2 Tip, body of the appendix, and caecum which adhered to the indirect hernia sac

Table 1 Classification of Amyand's hernias after Losanoff and Basson

Classification	Description	Surgical management
Type 1	Normal appendix within an inguinal hernia	Hernia reduction, mesh repair, appendectomy in young patients
Type 2	Acute appendicitis within an inguinal hernia, no abdominal sepsis	Appendectomy through hernia, primary endogenous repair of hernia, no mesh
Type 3	Acute appendicitis within an inguinal hernia, abdominal wall, or peritoneal sepsis	Laparotomy, appendectomy, primary repair of hernia, no mesh
Type 4	Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology	Manage as types 1 to 3 hernia, investigate or treat second pathology as appropriate

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