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Case Report

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Complicated Acute Appendicitis Accompanying Amyand's Hernia

Amyand Herniye Eşlik Eden Komplike Akut Apandisit Vakası

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ABSTRACT

Amyand's hernia is a very rare form of hernia in the inguinal hernia sac. Presently described is a case of Amyand's hernia complicated by acute appendicitis. A 62-year-old male patient presented at the emergency department with complaints of pain in the right inguinal region. He had acute appendicitis in the right inguinal hernia. An appendectomy was performed. Due to the high risk of infection, a mesh application was avoided. The patient was discharged on the first postoperative day. The incidence of Amyand's hernia accompanied by acute appendicitis is quite low. The current literature generally does not recommended an Amyand's hernia mesh repair with a laparoscopic appendectomy in the presence of acute appendicitis. In this case, the appendectomy was completed laparoscopically and the hernia sac was repaired intraperitoneally with primary suturing.

Keywords: Acute appendicitis; Amyand's hernia; appendectomy.

ÖZET

Amyand herni; inguinal herni kesesi içerisinde appendiksin görüldüğü çok nadir görülen bir fıtık çeşididir. Bu çalışmamızda Akut Apandisit ile komplike olmuş bir Amyand herni vakasını sunmaktayız. Acil servise sağ inguinal bölgede ağrı şikayetiyle başvuran 62 yaşında erkek hastada peroperatif olarak sağ inguinal herni kesesi içerisinde gelişen Akut Apandisit görünümü saptandı. Appendektomi işlemi uygulandı. Enfekte olma riski yüksek olduğundan dolayı herhangi bir mesh uygulamasından kaçınıldı. Hasta postoperatif birinci günde taburcu edildi. Akut Apandisitin eşlik ettiği Amyand Herni görülme sıklığı oldukça düşük bir durumdur. Mevcut literatürlere bakıldığında Laparoskopik Appendektomi ile eş zamanlı Amyand herni onarım bölgesine mesh konulması önerilmemektedir. Bu olgumuzda appendektomi laparoskopik olarak tamamlanmış ve herni kesesi intraperitoneal olarak primer süturasyon yardımıyla onarılmıştır.

Anahtar sözcükler: Akut apandisit; Amyand herni; appendektomi.

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Amyand hernia described for the first time by the Claudius Amyand in 1736. Cladius Amyand is a French surgeon working in London and performed his first successful appendectomy operation in 1735 on an 11-year-old boy with acute appendicitis perforated in the inguinal hernia sac.[1] Amyand hernia in which the appendix is seen in the inguinal hernia sac, is a very rare type of hernia. It consists about 1% of inguinal hernia cases seen in adults.[2] Acute appendicitis accompanying amyand hernia is even further rare condition. Amyand hernia rate complicated by acute appendicitis was found to be approximately between 0.08% and 0.13%.[3] In this study, we present a case of Amyand hernia complicated by acute appendicitis.

Case Report

In the examination of a 62-year-old male patient applied to the emergency room with

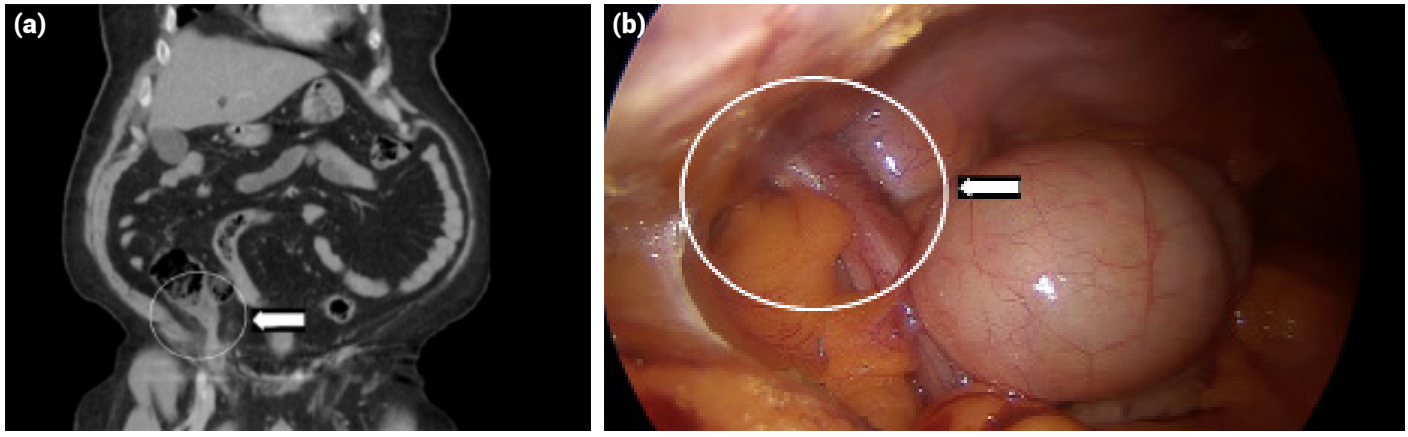

Figure 1. **(a)** Enflamed tubular structure in the hernia sac. **(b)** Acute appendicitis intact to the right inguinal hernia sac.

complaint of pain in the right inguinal region, there was tenderness and rebound in the right inguinal region and in the right lower quadrant of abdomen. The vital signs measured at the arrival of the emergency department were recorded as SPO_2: 99, Pulse: 107, Fever: 36.7 degrees, and TA: 108/71. Laboratory values were determined as WBC: 14700 µl , CRP: 32 mg/dl, AST: 45 U/L, ALT: 40 U/L, TOTAL BILIRUBIN: 0.9 mg/dl, direct bilirubin: 0.3 mg/dl, GGT: 41 U/L, CL : 98 mmole / L, creatinine: 0.87 mg/dl, LDH: 65 U/L, LIPASE: 4 U/L, NA: 136 mmole/L, HGB: 13.7 g/dl, HCT: 39.6%, PLT: 276000 10^3/µl, INR: 1.09. In his computed tomography, edematous and enflamed appendix was seen in the right inguinal hernia sac (Fig. 1a). Upon the decision of laparoscopic exploration, Acute Appendicitis appearance was observed peroperatively in the right inguinal hernia sac (Fig. 1b). By applying slow traction, the enflamed appendix was rejected into the abdomen with careful dissection. Then, the appendectomy was performed. The inside of the hernia sac was washed with plenty of saline, the hernia sac was sutured intraperitoneally with the help of polyglactin sutures. Because of the high risk of infection, any mesh application was avoided.

After the complete post-operative recovery, after the general informing, the information about inguinal hernia that will be repaired electively was also given. The patient was discharged on the first postoperative day. After laparoscopic appendectomy, in the pathological examination of the removed material, acute appendicitis accompanied by local peritonitis was detected.

Discussion

Amyand hernia is a condition that can affect all age groups (1–88 years) and the incidence is higher in males than in females.[4] Although the clinical presentation is not usually similar to classical acute appendicitis cases, it is in the form of non-reducible painful inguinal swelling.[3] It is difficult to diagnose Amyand hernia with Acute Appendicitis in the preoperative period. Therefore, it is necessary to perform USG or CT imaging in the presence of such suspicion.[4] If preoperative diagnosis can be made, it is recommended to perform appendectomy laparoscopically.[5] The inflammatory status of the vermiform appendix determines the surgical approach and the type of hernia repair. Losanoff and Basson have distinguished four basic types of Amyand hernia, which should be treated differently (Table 1).[6] The generally accepted approach is that no mesh is placed in the defect area because of the contaminated wound and high risk of infection.[7] In order to prevent wound infection, acellular dermal matrix applications in the contaminated area have become a prominent option as an alternative to prosthetic

Table 1. Pathological types of Amyand's hernia and their respective management

Type of hernia	1	2	3	4
Salient features	Normal appendix	Acute appendicitis localized in the sac	Acute appendicitis, peritonitis	Acute appendicitis, other abdominal pathology
Surgical management	Reduction or appendectomy (depending on age), mesh hemioplasty	Appendectomy through hernia, endogenous repair	Appendectomy through laparotomy, endogenous repair	Appendectomy, diagnostic workup and other procedures as appropriate

mesh applications.[8] Laparoscopic appendectomy has a lot of advantages rather than open appendectomy in the literature.[9] Based on our own experience, in this case report, we prefer Laparoscopic appendectomy without mesh insertion because of the mesh application to an inflamed tissue would increase the risk of infection, the mesh application in Amyand Hernia cases complicated with Acute Appendicitis was avoided.

Conclusion

The incidence of Amyand hernia accompanied by Acute Appendicitis is a quite low situation. When examining the present literature, it is not recommended to place a mesh in Amyand hernia repair area concurrent with the Laparoscopic Appendectomy. In this case, the appendectomy was completed laparoscopically, and the hernia sac was repaired intraperitoneally with the help of primary suturing.

Disclosures

Informed consent: Written informed consent was obtained from the patient for the publication of the case report and the accompanying images.

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Conflict of Interest: None declared.

Authorship Contributions: Concept – A.E.; Design – A.E.; Supervision – B.A.; Materials – Y.İ.; Data collection &/or processing – Y.İ.; Analysis and/or interpretation – A.E.; Literature search – K.M.; Writing – A.E.; Critical review – A.E.

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