

AMYAND'S HERNIA –A RARE CASE OF RIGHT-SIDED INGUINAL HERNIA

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Abstract

Amyand's hernia is the presence of the appendix in the inguinal hernia sac.

The prevalence of this type of inguinal hernia is about 1%. Majority of cases of Amyand's hernia are incidentally diagnosed during surgical treatment of inguinal hernia.

Amyand's hernia typically presents on the right side since right-sided inguinal hernia is more common and the appendix is located in the lower right quadrant of the abdomen.

We present a case of a 23-year-old patient hospitalized at the University Clinic for Digestive Surgery in Skopje for elective surgical treatment of right-sided inguinal hernia.

Keywords: Amyand's hernia, inguinal hernia, appendix

Case report

We present the case of a 23-year-old patient with a several-month history of a right-sided groin swelling that increased during exertion and physical work. There were no data on incarceration episodes. Pre-laboratory analysis showed: WBC 4.0, CRP 1.9, RBC 5.64, HGB 162, PLT 196.

Intraoperative finding revealed an indirect right-sided inguinal hernia. When the hernia sac was opened, the appendix was found to be adherent to the inguinal hernia sac.

It showed no signs of inflammation. All adhesions were released and the appendix was returned into the abdomen. Local hernioplasty was performed and Lichtenstein tension-free repair was done. Surgical and postoperative course was uneventful. The patient was discharged on the second postoperative day.

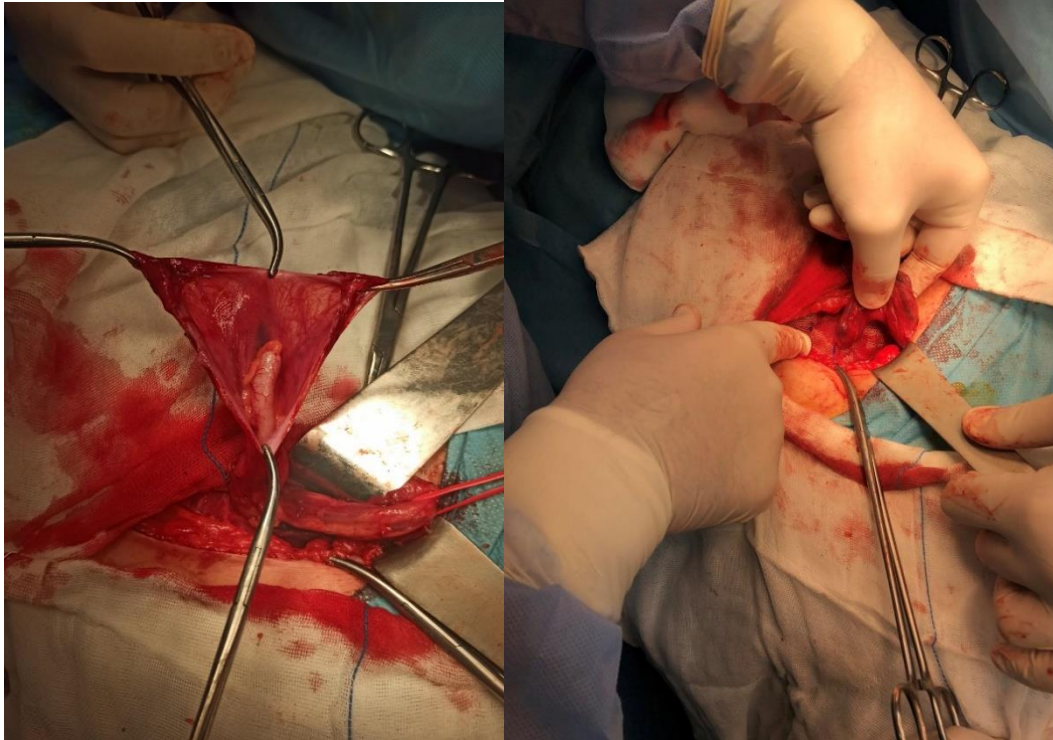


Image 1. Intraoperative finding of Amyand's hernia

Discussion

Amyand's hernia was named after the English surgeon of French origin Dr. Claudius Amyand who was the first one to describe the presence of an appendix within the inguinal hernia sac in 1735 [1-3]. The prevalence of Amyand's hernia is 1% of all inguinal hernias, but the real prevalence is much lower [4].

Losanoff and Bason' classification of Amyand's hernia: According to the appendix characteristics and clinical signs, Amyand's hernia is divided into four subtypes (Table 1) [5].

Type 1- there are no signs of inflammatory changes in the inguinal region; type 2 - Amyand's hernia characterized by septic changes that are confined to the hernia sac; type 3 - Amyand's hernia where septic changes have spread beyond the hernia sac; type 4 - Amyand's hernia that includes acute appendicitis and other related abdominal pathology.

Definitive preoperative diagnosis of Amyand's hernia is very rare. In almost all cases this type of hernia is an incidental intraoperative finding. Clinical examination, laboratory analyses and imaging techniques do not always indicate Amyand's hernia.

Although not always, but CT of the abdomen can help in establishing the diagnosis of this type of hernia. CT is not the first choice of radiologic diagnostic procedure in uncomplicated inguinal hernia [6]. Therefore, the diagnosis of Amyand's hernia is often overlooked. Ultrasonography is a useful tool for preoperative screening of Amyand's hernia since it is cheap and easily available for patients with positive clinical signs [7,8]. In addition, suspicion of Amyand's hernia can be supported by using CT. On the other hand, diagnosis of Amyand's hernia only from the ultrasonographic results is unreliable and depends on the skill of the ultrasonographer [9].

Table 1. Four types of Amyand's hernia

Classification	Description	Surgical treatment
TYPE 1	Normal appendix within the hernial sac	Hernia reduction, hernioplasty with polypropylene mesh, appendectomy in young patients.
TYPE 2	Acute appendicitis within the inguinal sac, with no abdominal sepsis.	Appendectomy through hernial sac, primary prosthetics with no use of polypropylene mesh.
TYPE 3	Acute appendicitis within the inguinal sac, abdominal wall sepsis/inflammation or peritonitis.	Laparotomy, appendectomy, primary prosthetics with no use of polypropylene mesh.
TYPE 4	Acute appendicitis within the inguinal sac, other related or unrelated abdominal pathology.	Management as types 1-3 including investigation or treatment of concomitant disease.

In general, primary treatment of Amyand's hernia without inflamed appendix is hernioplasty without appendectomy [10-12]. On the other side, management/repair of the appendix can result in secondary appendicitis [13,14]. These complications can be prevented if the intervention is performed laparoscopically [13].

Conclusion

Amyand's hernia is a rare type of inguinal hernia and its preoperative diagnosis is a huge challenge to the surgeon. The methods of choice for preoperative diagnosis are ultrasonography and CT, but the final diagnosis is almost always made during surgery. The type of the treatment of these hernias has to be adequate/relevant to the general health condition of the patient and the type of the Amyand's hernia. In uncomplicated Amyand's hernia, local hernioplasty with polypropylene mesh without appendectomy is a method of choice. In case of appendicitis, the use of polypropylene mesh should be carefully taken into consideration to avoid mesh infection.

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