

Amyand Hernia Combined With Direct Inguinal Hernia Containing Urinary Bladder: Report Of A Case

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Citation

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Abstract

Amyand hernia combined with direct inguinal hernia is a rare clinical entity. Here we present a patient who was admitted to emergency department with incarcerated inguinal hernia. Intraoperatively, he was found to have Amyand hernia together with direct inguinal hernia containing urinary bladder.

INTRODUCTION

Amyand hernia is a form of indirect hernia which contains the appendix vermiformis. The presence of a normal appendix in the hernia sac is reported in 0.28 to 1% of the cases. An inflamed appendix is present in 0.07 to 0.13% of the patients. [1]. Amyand hernia was first defined in 1731 and since then it is reported as a rare clinical entity. Most of the cases were reported as right-sided hernias. Nevertheless, there are left sided herniations reported; interestingly none of these patients had situs inversus [2-4].

The hernia in the inguinal region frequently contains omentum and small intestine [5]. In rarer cases, ovaries, ovarian tubes, urinary bladder, Meckel's diverticulum or other structures have been reported [6,7].

The frequency of sliding type inguinal hernia containing the bladder is reported to be 1-4% among newborns and infants. The incidence increases with increasing size of the hernia and the age of the patient and may reach 10% in the elderly [8]. Urinary outflow obstruction, pelvic mass and any entity causing an increase in the intraabdominal pressure may predispose to urinary bladder herniation [9].

The present report is unique because Amyand hernia is associated with sliding type direct hernia containing the urinary bladder in a pediatric patient; it is aimed to discuss the possible treatment modalities in the guidance of current literature.

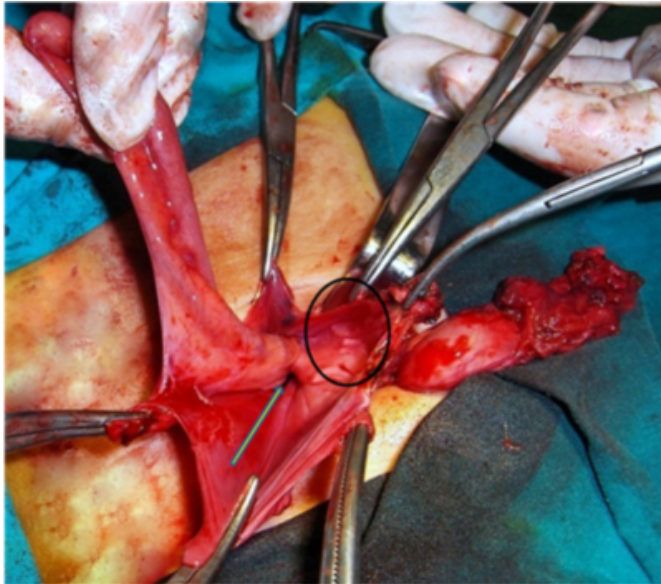
CASE REPORT

A four-year-old male patient was admitted to the emergency department with an incarcerated right inguinal hernia and

local pain. The patient's only complaint was right inguinal swelling and local pain. The patient had no lateralizing symptom or complaint. Laboratory analysis including urinalysis was found to be in normal range. The abdominal examination was unremarkable. The history revealed that the patient had a hernia since birth and suffered frequent episodes of hospitalization for incarceration, all of which were treated conservatively. Due to the current clinical picture and considering the frequent character of the incarceration from the history of the patient, an emergency operation was planned. Intraoperatively, the patient was found to have an indirect inguinal hernia; which contained the appendix displaying inflammatory changes (Figure 1).

Figure 1

Figure 1 demonstrates the intraoperative findings. The yellow arrow shows the indirect component. The black circle shows the region of direct hernia. The appendix shows secondary inflammatory changes.



Following appendectomy, high ligation was performed to the indirect inguinal hernia. Furthermore, medial dissection revealed that the patient had a direct inguinal hernia through a defect in the transverse fascia. As the hernia sac was dissected, a iatrogenic perforation occurred to the content of the sac and the organ was found out to be the urinary bladder. Primary repair was performed to the urinary bladder and a urinary catheter was placed. The defect in the transverse fascia was repaired primarily. The postoperative course of the patient was uneventful and 2 weeks after the operation, the urinary catheter was removed after a normal cystogram.

DISCUSSION

The present case is an incarcerated Amyand hernia and a concomitant sliding type inguinal hernia containing the urinary bladder. Inguinal hernias may contain rare organs such as ovaries, ovarian tubes, colon, Meckel's diverticulum, etc. [6,7] Previous reports of Amyand hernia define an inflamed appendix in the hernia sac and furthermore, in extreme cases, even perforated appendicitis may also be present [10]. The inflammation of the appendix is thought to be a secondary event due to herniation and luminal obstruction. The condition of the appendix determines the type of surgery [11, 12]. We performed appendectomy due to secondary inflammatory changes in the organ.

Amyand hernia is rarely encountered in adulthood. In adult

patients, a part of the urinary bladder in the hernia sac is more frequently encountered. It is usually small and asymptomatic [8]. Most urinary herniations are right-sided. Together with increasing size of the hernia, it becomes symptomatic [14, 15]. Among the symptoms, dysuria, polyuria, hematuria, nocturia, and reduction of hernia size after urination were reported [14].

Amyand hernia is a rare clinical entity and is more frequently encountered in pediatric patients. It is usually diagnosed intraoperatively. Contrary to adult patients; urinary bladder herniation during childhood is very rare. Although preoperative ultrasound and computed tomography can aid in diagnosis, a considerable amount of patients is also diagnosed intraoperatively [14-16]. In the present case, there were no urinary symptoms and the patient complained of right side swelling and pain. Preoperative diagnosis is important to prevent iatrogenic perforation [17]. In our patient, no preoperative imaging was planned due to the emergency nature of the clinical situation and the pediatric age of the patient.

In conclusion, in pediatric patients congenital hernias can rarely be associated with a direct inguinal component and urinary bladder can be involved in the direct hernia sac. In any case of direct inguinal hernia, herniation of the urinary bladder should always be considered as a possible scenario and therefore a careful dissection should always be carried out.

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