

# An unusual inguinal hernia presentation in an infant: Amyand's hernia with acute appendicitis

## Süt çocuğu yaş grubunda nadir bir inguinal herni oluşumu: Amyand herni ve akut apandisit birlikteliği

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### Abstract

Amyand's hernia is a rare condition defined as the presence of appendix vermiformis within the hernia sac, and it constitutes 1% (0.19-1.7%) of all inguinal hernias. Inflammation of the appendix within the inguinal sac is rarer, comprising 0.1% (0.07-0.13) of all Amyand's hernia cases. Although the clinical presentation of the disease varies depending on the inflammation of the appendix, the diagnosis is usually made during the operation. We herein present a 2-month-old male patient who underwent appendectomy during right inguinal herniotomy after visualization of the inflamed appendix adhering to the wall of the hernia sac.

**Keywords:** Amyand's hernia, Appendicitis, Infants, Appendectomy

### Öz

Amyand herni, apendiks vermiformisin fitik kesesi içinde bulunması olarak tanımlanan nadir bir durumdur. İnsidansı tüm inguinal herniler içinde %1 (%0,19-1,7)'dir. İnguinal kese içindeki apendiks inflamasyonu daha nadirdir, tüm Amyand herni vakalarının % 0,1 (0,07-0,13)'ini oluşturur. Hastalığın kliniği apendiks inflamasyonuna bağlı olarak değişmekle birlikte tanı genellikle operasyon esnasında konur. Bu çalışmada sağ inguinal herni nedeniyle operasyona alınan, operasyon esnasında kese duvarına yapışık, apendiks distalinde inflamasyon bulguları olması nedeniyle apendektomi yapılan 2 aylık bir erkek hasta sunuldu.

**Anahtar kelimeler:** Amyand herni, Apandisit, İnfant, Apendektomi

## Introduction

Amyand's hernia is a rare condition defined as the presence of appendix vermiformis within the hernia sac. The disease was first described by Claudius Amyand in 1735 in an 11-year-old male patient during surgery for inguinal hernia, after he detected a perforated appendix in the sac [1]. It constitutes 1% (0.19-1.7%) of all inguinal hernias. Inflammation of the appendix within the inguinal sac is rarer and comprises 0.1% (0.07-0.13%) of all Amyand's hernia cases [2]. Although the clinical presentation of the disease varies depending on the inflammation of the appendix, the diagnosis is usually made during the operation.

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## Case presentation

A 2-month-old male patient was admitted to the outpatient clinic with complaint of swelling in the right groin that began 10 days ago. Physical examination revealed a reducible right inguinal hernia. Preoperative examinations of the patient were performed, consent was obtained from the patient's family and elective surgery was planned. On the day of the operation, the hernia could not be reduced. The family stated that the swelling had persisted for the last 24 hours and the patient was restless. Under general anesthesia, a transverse incision was made in the right inguinal region, all fascial layers were incised, and the indirect inguinal hernia sac was identified. Dissection was performed with preservation of the cord and vessels and a distally hyperemic, erect appendix with impaired circulation was found adherent to the sac wall within the hernia sac (Figures 1, 2). Appendectomy was performed after ligation of the appendix vermiformis. The inguinal hernia sac was high-ligated, and the operation was completed. The patient was discharged uneventfully on the first postoperative day. Histopathological examination of the excised specimen was reported as consistent with appendicitis.



Figure 1: Appendix vermiformis within the hernia sac



Figure 2: Appendix vermiformis mesentery adherent to the sac wall

## Discussion

Indirect inguinal hernia is one of the most common surgical conditions in the pediatric age group. The incidence of this disease varies between 0.8% and 4.4% among pediatric patients [3]. The omentum, small intestine or the bladder are most commonly found within the hernia sac. Rarely, Meckel's diverticulum (Littre hernia), part of the intestinal wall (Richter's hernia) and an inflamed or non-inflamed vermiform appendix (Amyand's hernia) may also be observed. Amyand's hernia

constitutes 1% of all inguinal hernias [2,4,5] and is more common in males than females. Inflammation of the appendix is observed in 0.13% of Amyand's hernia cases. It is usually located in the right and in rare cases, left inguinal regions [6].

The preoperative diagnosis of Amyand's hernia is difficult, and it is usually made during surgery. In a study by Cankorkmaz et al. [7], only one of the twelve newborns (median age 40 days) operated for Amyand's hernia in their clinic was diagnosed preoperatively. In our case, the diagnosis was made intraoperatively.

Amyand's hernia treatment may vary depending on the condition of the appendix in the sac and the presence of other pathologies. If there is evidence of inflammation or perforation in the appendix vermiformis, appendectomy is performed through the same incision, followed by hernioplasty [8]. There are many publications advocating appendectomy to eliminate the risk of appendicitis in Amyand's hernia with a non-inflamed appendix vermiformis [9,10]. However, many surgeons do not perform prophylactic appendectomy in the pediatric patient group due to insufficient data and the risk of infection during a non-contaminated surgery [7,11]. In this case, appendectomy was performed from the same incision due to inflammation and circulatory disturbance at the distal end of the appendix vermiformis.

Amyand's hernia is rare during the infantile period, and inflammation of the appendix vermiformis within the sac is even rarer. Since the diagnosis is usually made intraoperatively, the decision of the treatment should be given based on surgical findings. In cases of hernioplasty, the possibility of Amyand's hernia should be kept in mind and the contents of the hernia sac should be visualized.

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