

## TWO CASES OF AMYAND'S HERNIA

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### Abstract

The presence of the vermiform appendix in an inguinal hernia sac is called "Amyand's hernia" which is a rare entity. Here we are reporting two cases of Amyand's hernia. The first case presented as a case of obstructed, Lt. sided an inguinal hernia with Caecum and Appendix as contents. The second case presented as right-sided inguinal hernia, a pre OP diagnosis of Amayand' hernia was made as the sac had a vermiform content. Both cases were operated and followed-up Post OP for 6 months, had no complications.

**Keywords:** Appendix; Amyand's hernia; Inguinal hernia; Herniotomy; Appendectomy

### 1. Introduction

An inguinal hernia containing appendix is termed as an Amyand's hernia. The presence of the vermiform appendix within an inguinal hernia was first described by Claudius Amyand, a French-born English surgeon, during herniotomy on a 11year-old boy in 1735 [1] The incidence of Amyand's hernia has varied in the literature, ranging from 0.19% to 1.7% of reported hernia cases and three times more likely to be diagnosed in children than adult [2.] Here we are reporting two cases of Amyand's hernia.

#### CASE -1

An 18-month old male child reported to the emergency room with a complaint of abdominal pain, bilious vomiting, abdominal distension, fever and obstipation for 01-day duration. On clinical examination, child had a fever, tachycardia, distension abdomen with increased bowel sound and non-reducible, tender, left groin swelling. The child had raised WBC counts with neutrophils dominant and electrolytes were normal. X-ray abdomen showed multiple air fluids level (Figure 1) suggesting obstructed inguinal

hernia. Preoperative resuscitation with intravenous fluid and antibiotics were initiated. Intra-op hernial sac contained edematous, obstructed caecum and normal appendix as contents (Figure 2). Appendectomy and reduction of the caecum were done through the inguinal incision. The hernial sac managed with high ligation of the sac and herniotomy. Post-op period was uneventful. As caecum and appendix presented in Lt. sided hernia Barium meal follow-through done after 06 weeks of discharge to rule out gut malrotation and which did not reveal any mal-rotation of the gut (figure 3).

#### CASE-2

A 30-month old male child reported to surgical OPD with a complaint of right inguinoscrotal swelling for the past 02 years. On clinical examination, child found to have a right inguinal hernia and its content felt as thick cord/round worm-like structure. Diagnosis of Amyand's hernia was made clinically. The child underwent herniotomy under GA and intra operatively found to have a long appendix (12 cms) as content. Appendectomy and high ligation of the sac were done

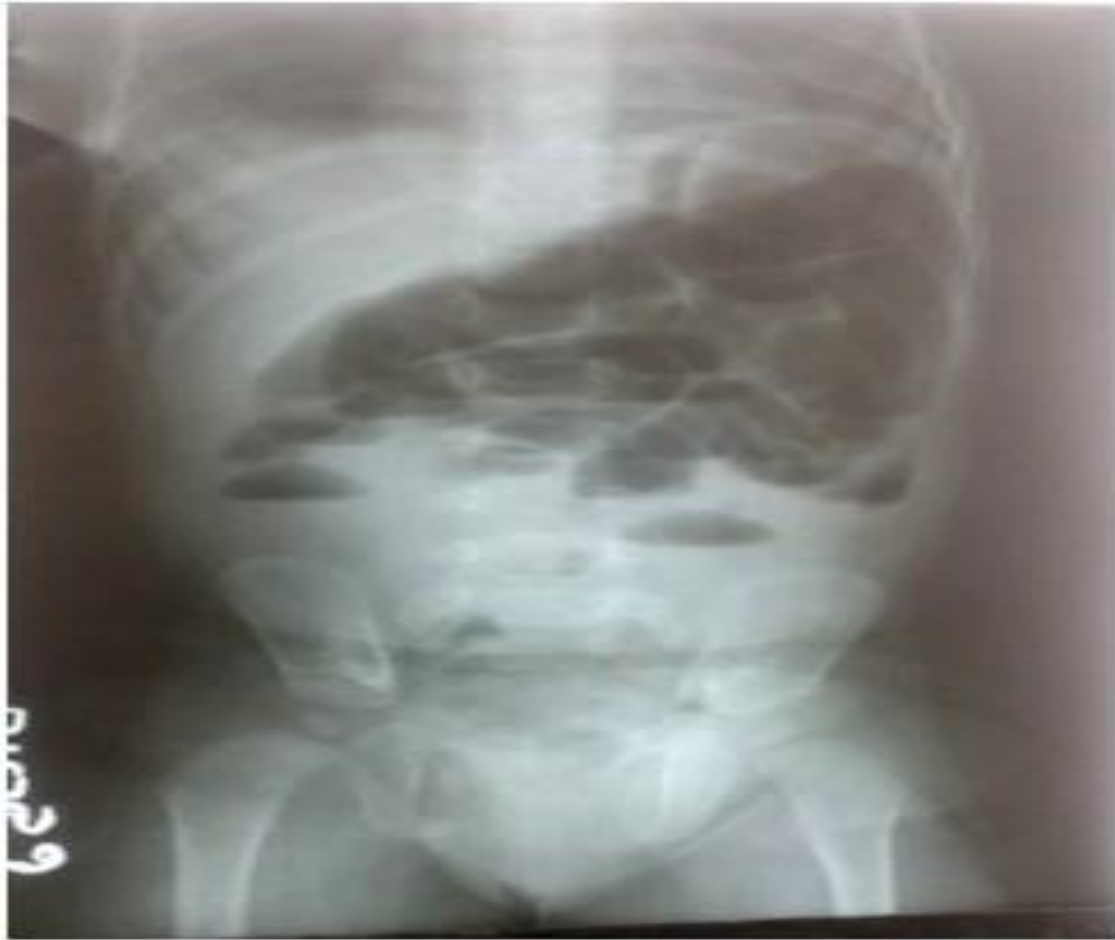


Figure 1: X-ray abdomen showing multiple air fluids level

(figure4). The postoperatively, the child recovered well without any complications.

## 2. Discussion

Amyand's hernia is a rare entity and it was first described by Cladius Amyand, who successfully performed the first reported appendectomy for the inflamed appendix, encountered during herniotomy on an 11-year-old boy in 1735 at St George's hospital. The case was published in Philosophical Transaction of the royal society of London [1, 2]. The incidence of Amyand's hernia ranging from 0.19% to 1.7% and it is three times more common in children than adults [2]. The association of appendicitis is even rarer and reported to be 0.1% [3]. The majority of cases are right-sided, which is understandable in view of the normal anatomy of the appendix, additionally, right inguinal hernias are more common than left

ones [4]. Left-sided Amyand's hernia is very rare and it had been reported in cases of situs inversus, intestinal malrotation or mobile caecum [5]. In our case report, one child had left Amyand's hernia possibly caused by mobile caecum, as malrotation or situs inversus could not be radiologically proved. The clinical picture of Amyand's hernia is that of an inguinal hernia and depends mainly on the inflammatory condition of the appendix and most of the times presented as a painful inguinoscrotal mass [6]. The preoperative diagnosis of Amyand's hernia is not straightforward and is generally an incidental finding during surgery. Pre-operative diagnosis can be made using ultrasound and CT scan [7]. However, these investigations are not routinely done after clinical diagnosis of strangulated inguinal hernia. Only a few cases have been reported where the diagnosis was made pre-operatively similar to our second case of



Figure 2: Edematous Caecum and normal appendix in hernia sac of obstructed left inguinal hernia



Figure 3: Barium meal X-ray showing normal position of the gastrointestinal tract



Figure 4: Normal appendix in hernia sac of right inguinal hernia

Amyand's hernia which was diagnosed clinically in OPD and confirmed intra-operatively. Treatment of Amyand's hernia depends upon the status of the appendix, whether normal, inflamed or perforated. Losanoff and Basson proposed a classification scheme to determine the surgical management of Amyand's hernia depending upon the status of the appendix (Table 1) [8].

In cases of a grossly normal appendix, an appendectomy may be controversial. Debate continues in the surgical literature about the advisability or otherwise of "incidental" appendectomy during abdominal operations [9]. Although guidelines have been promulgated, the issue is far from being resolved. Generally, the advocates of "incidental" appendectomy consider decreased future morbidity, mortality, and cost of surgery, with no increase in anaesthetic risk, wound infection, or operative time, as reliable justifications [9,5]. These points had been considered sufficient to justify incidental

appendectomy. Those who oppose suggest that violation of aseptic surgical technique by transection of a faecal-containing organ in an otherwise clean operation may increase morbidity and mortality from septic complications [2]. In addition, it has been proved that the appendix plays a role in the immune system of the body especially in children. Furthermore, in the last decades, the appendix has been used in many paediatric surgical procedures [2, 5]. In our cases, in addition to herniotomy, we decided to perform an appendectomy, whether the appendix was grossly normal or inflamed because we adopt the opinion that an abnormal position of the appendix necessitates its removal because of a possible future abnormal presentation [5].

**Table 1: Losanoff and Basson’s classification of Amyand’s hernia**

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 a hernia, primary repair of a hernia, no mesh
Type 3	Acute appendicitis within an inguinal hernia, abdominal wall or peritoneal sepsis	Laparotomy, appendectomy, primary repair of a hernia, no mesh
Type 4	Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology	Manage as types 1–3 a hernia, investigate or treat secondary pathology as appropriate

### 3. Conclusion

Amyand’s hernia is a rare type of an inguinal hernia and even rarer on the left side. Awareness of this clinical entity would be useful in the preoperative evaluation of patients with non-reducible incarcerated inguinal hernias. This would likely result in more appropriate planning for surgical intervention.

### 4. References

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