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## Case Report

# Amyand's Hernia Presenting as a Scrotal Abscess – A Rare Presentation in a Newborn

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## ABSTRACT

A 26-week-old extreme preterm boy presented with a right hemiscrotal abscess. An ultrasound of the scrotum suggested right epididymo-orchitis. The abscess was drained and appropriate intravenous antibiotics were initiated. One month later, he was diagnosed with a right sided irreducible inguino-scrotal swelling, confirmed as bilateral inguinal hernia with herniating bowel loop on ultrasonography. With this diagnosis, he was planned to undergo a bilateral herniotomy. Intraoperatively, an inflamed and perforated appendix was found herniating into the right sac. The tip of the appendix was adherent to the scrotal wall, where the pus was extruding out. Appendectomy and bilateral herniotomy was done successfully and histopathology revealed acute appendicitis. Baby recovered well postoperatively. Owing to the fragile nature of tissues in neonates, accessions of planes was challenging. Amyand's hernia presenting as a scrotal abscess is extremely rare in newborn infants, and less than 5 cases have been reported till date.

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## Introduction

Claudius Amyand, a French Surgeon, first reported the successful removal of an inflamed appendix found within the sac of an inguinal hernia in an 11-year-old boy, in 1735. Thereafter, the occurrence of the same has been credited to his name. Since then, only 200 odd cases have been documented worldwide. Amyand's hernia is more frequent among preterm and small for gestational age newborns, but Amyand's hernia with acute purulent appendicitis is not a common presentation [1]. Losanoff and Bason classified the Amyand's hernia into 4 types. Our case belongs to Type II. Owing to its uncharacteristic and varied presentation, it is difficult to diagnose preoperatively. We are presenting this case because of its rarity. A retrospective analysis of the circumstance provided us a lesson to construe this perplexing case.

## Case Presentation

An extreme preterm 26 weeks boy, of a second degree consanguineous marriage, was conceived by *in vitro* fertilization. He was delivered by emergency caesarian section in view of preterm premature rupture of membranes with anhydramnios. He presented with redness, swelling and tenderness of right side of scrotum since Day 3 of life (Figure 1). On examination, he had a heart rate of 158 beats per minute and respiratory rate of 52 per minute. General examination, apart from scrotal inflammation, rest of the abdomen was unremarkable. Although initial per abdomen examination was unremarkable, 1 month later, an irreducible right inguino-scrotal swelling was demonstrated. Initial blood investigations showed a Total count of 11700, polymorphs 70 and lymphocytes 15.

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**Figure 1:** Depicting the presence of right hemi-scrotal abscess.

In view of redness, swelling and tenderness of right side of scrotum, an Ultrasound of the scrotum was done, which showed mild exudative fluid with multiple echogenic foci (air specks) within right scrotal sac. Right spermatic cord thickening with increased vascularity. Enlarged and heterogenous epididymis with ill-defined outline and increased vascularity. This was suggestive of severe right epididymo-orchitis. 13 days later, Total counts were 15800, polymorphs 39 and lymphocytes 53. 1 month later, Total counts were 18600, polymorphs 32 and lymphocytes 62. Ultrasound of abdomen revealed bowel loops noted to be herniating through defect in right inguinal region. Left inguinal region had minimal fluid and herniating bowel loops.



**Figure 2:** Inflamed appendix noted as content of inguinal hernia sac.

Initially, it was suspected to be epididymo-orchitis with scrotal abscess. After drainage of abscess, there was persistent pus discharge, which on further investigation was found to be an Amyand's hernia. Upon incision and drainage of the right hemiscrotal abscess (Figure 1), pus culture isolated *Escherichia coli* and appropriate intravenous antibiotics were initiated. As inflammation persisted with pus discharge, repeat pus culture was sent and antibiotic was upgraded. With the diagnosis of a bilateral inguinal hernia, he was planned to undergo a Bilateral herniotomy. Intraoperatively, an inflamed and perforated appendix was found herniating into the right sac (Figure 2). The tip of the appendix was adherent (Figure 3) to the scrotal wall, where the pus was extruding out. Appendectomy and bilateral herniotomy was done successfully through the same incision and histopathology revealed acute appendicitis. Upon follow up at one year, the scrotal wound has healed,

scar is healthy. Baby is active, healthy, and growing with normal milestones.



**Figure 3:** Tip of perforated appendix adherent to right side of scrotum.

## Discussion

The presence of the appendix within the sac of an inguinal hernia is denoted as an Amyand's Hernia, eponymous of Claudius Amyand. Owing to the anatomy and the dearth of lymphoid tissue in the appendix of a neonate, obstructive appendicitis is rare in this group. The high perforation rate may be explained by the thinness of the appendix wall and short omentum which cannot block an impending perforation. The inflammatory reaction is localized during initial phase of perforation [2]. Preoperative clinical diagnosis is difficult, as there are no specific clinical and radiological features to look out for. The condition has a variable presentation and can be mistaken for epididymo-orchitis, strangulated hernia, incarcerated hernia or torsion testes. Most cases are incidental findings at the time of a hernia repair [3].

Luchtman *et al.* reported a 6 days old boy with an incarcerated inguinoscrotal hernia, in whom purulent fluid and perforated appendix was encountered in the hernia sac only during herniotomy [3]. Panagidis *et al.* reported a 25 days old male neonate, diagnosed as strangulated inguinal hernia complicated by bowel perforation and enterocutaneous fistula. Perforated appendix was found adherent to the right testis, managed with appendectomy [4]. Kumar *et al.* reported a neonatal pyoscotum and perforated appendicitis in a 26 days old male with undescended testis, initially diagnosed to have testicular torsion [5]. Jain *et al.* reported a 1-year-old male with right hemiscrotum discharging sinus, for which ultrasonography of right inguinoscrotal area showed bowel herniation; upon inguinal exploration, revealed a sliding hernia with caecum and appendix densely adherent to the scrotum [6]. A great proportion of authors agree that appendectomy is not necessary when a normal appendix is encountered as content of the hernia sac, the reason being, it may be useful during antegrade continence enema, biliary tract reconstructions and urinary diversions [4, 7].

Any case of scrotal abscess in a newborn may not be due to epididymo-orchitis. All newborns with scrotal swellings should be worked up for inguinoscrotal hernia. A non-healing, persistent scrotal sinus should raise the suspicion of Amyand's hernia with appendicular abscess. Although ultrasonography is useful for evaluating scrotal conditions, in complex cases like ours, it plays an insufficient role when compared to computed tomography [8].

## Conflicts of Interest

None.

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