African Jounal of perinatology vol.2 issue 2 de Mai-Août 2025 P;(86-89)

CASE REPORT

Left-sided Claudius Amyand's hernia revealed by a recurrence of hernia repair

Pauline Mantho Fopa[1,3], Eric Bitchoka[3], Theophile Kamguep[4], Faustin Mouafo Tambo[2].

1- Faculty of Medicine and Pharmaceutical Sciences, University of Douala
2- Faculty of Medicine and Biomedical Sciences, University of Yaoundé
3- Department of Pediatric Surgery, Laquintinie Hospital, Douala
4- Department of General Pediatrics, Protestant Hospital of NdogBati, Douala

Corresponding author: Mantho Fopa Pauline, Pediatric Surgeon, Laquintinie Hospital, Douala. Email: [mapaulefr2002@yahoo.fr]; Tel: (00237) 690687823/ 652794271; ORCID: 0000-0002-4470-745X

Abstract: Claudius Amyand's hernia (CAH) is a rare form of complication of the processus vaginalis in children. It involves the presence of an appendix incarcerated within the hernial sac, whether inflamed or not. Pediatric inguinal hernia results from the persistence of the processus vaginalis in boys and the canal of Nuck in girls.

We conducted a clinical observation of a case in the pediatric surgery department of Laquintinie Hospital, Douala (Cameroon). We report the case of a 4-month-old male infant who presented with a recurrence of left inguinal hernia repair three weeks postoperatively, associated with local sepsis. Through the previous left inguinal approach, an anterograde appendectomy and closure of the inguinal sac were performed. The postoperative course was uneventful with a follow-up of three months.

Pediatric inguinal hernia may reveal appendicitis within its contents. Surgical management remains the treatment of choice, and the prognosis is favorable.

Keywords: Inguinal Hernia; Appendicitis; Claudius Amyand; Left Side; Infant; Laquintinie

Introduction

Claudius Amyand's hernia (CAH) is characterized by the presence of an appendix, either healthy or pathological, within a hernial sac. Rare, its left-sided occurrence is even more exceptional, often associated with anatomical anomalies such as intestinal malrotation [2,3,4]. Diagnosis is generally made during surgery, as preoperative examinations are not very specific [5,6]. CT scan is the most sensitive and specific examination, but its use is limited in acute pediatric abdomens. Losanoff and Basson's classification distinguishes four types of CAH and guides management, which remains surgical with a good prognosis when recommendations are followed [8,9].

Case Presentation

The medical history reveals that a 4-month-old male infant was admitted to the pediatric surgical emergency department for left abdominal and inguinal pain, an indurated and inflamed left inguinoscrotal swelling, and a fever of 39°C. At 2 months, he had undergone surgery for an uncomplicated left inguinal hernia. Three weeks postoperatively, a recurrence of the left swelling occurred in a febrile context. A 10-day course of antibiotics and anti-inflammatory treatment was Surgical Intervention

After a favorable pre-anesthetic evaluation, a re-exploration of the left transverse inguinal approach (figure 1) under general anesthesia with orotracheal intubation was performed. Subcutaneous dissection allowed access to the peritoneal sac, revealing a phlegmonous appendix (figure 2). An anterograde appendectomy was performed, followed by closure of the processus vaginalis with a simple Vicryl 3/0 suture anchored to the transverse muscle. The postoperative course was uneventful unsuccessful, and a second surgical opinion concluded a recurrence of the hernia, necessitating another intervention.

Physical examination revealed a recent 5 cm transverse inguinal incision scar, a painful and inflamed mass with shiny skin. The tests were intra-scrotal and of normal size. The clinical diagnosis was a recurrence of left inguinoscrotal hernia with localized cutaneous sepsis.

with an aesthetic scar. The medication regimen included a 7-day course of intravenous bi-antibiotic therapy and level 1 analgesics. The infant was discharged from the hospital 7 days postoperatively. Medical treatment was well conducted, and local care consisted of dressings. Discharge criteria included symptom resolution, regular bowel movements, and notable clinical improvement. After 6 months, no complications were noted.

TABLEAU & FIGURES



Figure 1: Left inguinal approach



Figure 2: Surgical specimen: Phlegmonous appendicitis (Appendix + base of the cecum)

Tableau I: Losanoff and Basson's Classification [8]		
Types	**Classification Description**	**Surgical management**
Type 1	Normal appendix within an inguinal hernia	Hernia reduction, mesh appendectomy in young patients repairs,
Type 2	**Acute appendicitis within an inguinal hernia, no abdominal sepsis**	**Appendectomy through hernia primary repair of Hernia, no mesh**
Type 3	Acute appendicitis within an inguinal hernia, abdominal wall, or peritoneal sepsis	Laparotomy, appendectomy, primary repair of hernia, no mesh
Type 4	Acute appendicitis within an inguinal hernia, related or unrelated abdominal pathology	Manage as type 1 to 3 hernia investigate or treat second condition as appropriate

Discussion

Claudius Amyand's hernia is characterized by its rarity on the right side, the frequent position of the cecum and appendix in the iliac fossa, and its exceptional occurrence on the left side, indicating an associated anomaly such as intestinal malrotation. Its incidence is justified by the particularity of finding the appendix in a hernial sac in infants, estimated at 0.13%.

The clinical presentation of our patient is a recurrence of left inguinal hernia. The recurrence of left inguinal swelling in infants is a rare complication after repair of the persistent processus vaginalis. As a hypothesis, we suggested the unawareness of the presence of the appendix in the hernial sac during the first intervention by the surgeon, leading to its strangulation and superinfection.

Postoperative recurrence can be explained by increased abdominal pressure and a defect in cecal adhesion, leading to incarceration and strangulation of the appendix. Thus, we can describe the underlying mechanisms as: on the one hand, decreased blood supply due to adhesions and compression in the external inguinal orifice, increasing intra-abdominal pressure. On the other hand, recurrent inflammation of the inguinal region is due to bacterial proliferation and intraoperative manipulations triggering inflammation.

Intraoperative diagnosis allowed us to classify CAH as type 2 of Losanoff and Basson. At this stage, we performed an anterograde appendectomy with concurrent closure of the processus vaginalis. After verifying inguinal integrity, we restored skin integrity with an intradermal Vicryl 3/0 suture. According to some authors, this surgical procedure can be performed laparoscopically. However, it requires a trained team of anesthetists and pediatric surgeons. We recommend routine abdominal and inguinal ultrasound in cases of persistent processus vaginalis. A clinical dilemma arises regarding preventive appendectomy during processus vaginalis repair upon discovering CAH. Some authors specify that the decision will depend on age, life expectancy, and the risk of developing acute appendicitis. The favorable outcome after a 6-month follow-up confirms the benign nature of processus vaginalis pathologies in our pediatric surgical practice in Douala

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Conclusion

Claudius Amyand's hernia is a rare presentation of inguinal hernias in children. When an inguinal hernia is complicated or strangulated, it is essential to consider imaging studies from the initial approach. Ultrasound or CT scan can guide the surgical plan and identify involved intra-abdominal organs, especially in cases of inflamed and suppurative appendicitis. Adequate management ensures a good postoperative prognosis.

Keywords: infant, recurrence, hernia, appendix, Claudius-Amyand, prognosis, Douala.

Conflicts of Interest: The authors declare no conflicts of interest.

Author's Contributions: All authors contributed equally

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