Hernial recurrence presenting as Amyand's hernia. A case report

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Case Report

General Surgery

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Background: Amyand's hernia is defined as the presence of the cecal appendix within an inguinal hernia. It is a rare condition, with an incidence of 1% of all inguinal hernias, while the presence of appendicitis within an Amyand's hernia accounts for 0.1% of all appendicitis cases. Most often, it is an incidental finding during inguinal exploration in the operating room. The clinical presentation may include pain starting in the epigastrium or periumbilical region that migrates to the right lower quadrant, associated with an irreducible mass in the right inguinal region. Possible complications include incarceration, strangulation, and perforation.

The diagnosis of a complicated inguinal hernia is clinical; however, an abdominal CT scan may be used to identify the hernial contents, where the presence of the cecal appendix may or may not be observed. The treatment of choice is surgical.

We present the case of a 57-year-old male patient with a history of inguinal hernioplasty using a Rutkow-Robbins mesh in 2024, who developed a recurrent hernia in the form of an Amyand's hernia. The simultaneous presentation of an inguinal hernia recurrence and an appendix within the hernial sac is extremely rare (0.01% of all hernioplasties). Additionally, the incidence of recurrence in hernioplasty using the Rutkow-Robbins technique, according to multicenter studies, is 1-2%. Given these findings, we report this case treated at our institution.

Keywords: Amyand's hernia.

Amyand's hernia is defined by the presence of the cecal appendix within an inguinal hernia. It is a rare condition, with an incidence of 1% of all inguinal hernias, while only 0.1% of cases progress to acute appendicitis due to delayed presentation and missed diagnosis (2, 5). It is more frequently reported in children and has an associated mortality rate of 14–30%, secondary to peritonitis and sepsis.

There is no specific clinical presentation, and diagnosis is challenging, with most cases being an intraoperative finding. The surgical treatment for this type of hernia varies and largely depends on the surgeon's judgment and the presentation of the Amyand's hernia.

Case report

57-year-old male patient with no significant chronic degenerative medical history, and a previous right inguinal hernioplasty with Ruttkow-Robbins mesh technique in 2024. He reports increased swelling and pain in the right inguinal region for 8 months, with recent worsening of pain and non-reducible contents that could not be manually reduced by the patient. Due to persistent symptoms and clinical deterioration, he decided to seek care at our unit. Focused physical examination revealed a soft, depressible abdomen with normoactive peristalsis, moderate pain on deep palpation in the right iliac fossa, negative appendicular signs, and no rebound tenderness. In the inguinal region, a swelling was observed, tender on moderate and deep palpation, with a non-reducible hernial sac measuring 8x6 cm and no local discoloration or temperature changes.

Based on the above findings, an inguinal ultrasound was ordered, which reported: non-strangulated right inguinal hernia measuring approximately 16.6 × 9.2 × 5.7 cm, containing intestinal loops with preserved blood flow on Doppler examination. Additionally, a computed tomography (CT) scan was performed, identifying: right inguinoscrotal hernia with a hernial defect of 3.7 cm and a hernial sac measuring 7.6 × 5.3 cm containing intestinal contents. (Figure 1).

The patient was diagnosed with an incarcerated recurrent inguinoscrotal hernia and was taken to the operating room for inguinal exploration. During the procedure, loss of normal anatomy with

fibrosis was found, along with previous mesh with granulation tissue adhered to the spermatic cord

From the Department of Surgery at Hospital General Regional no 1 Chihuahua, Chihuahua, México. Received on June 29, 2025. Accepted on July 3, 2025. Published on July 5, 2025.

DOI 10.5281/zenodo.15812084

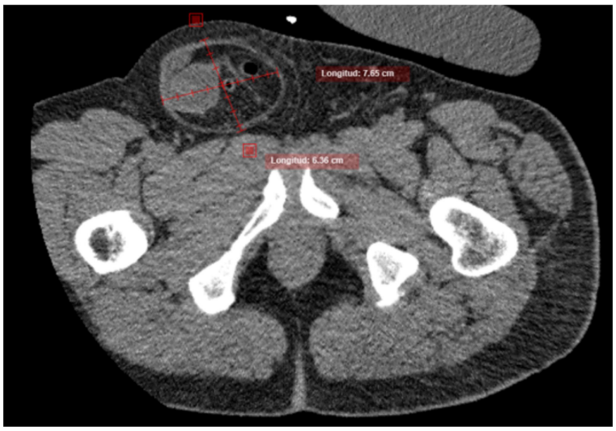

Figure 1. Abdominal CT scan showing a hernial sac measuring 7.6 × 5.3 cm containing intestinal contents.

and hernial sac, indirect inguinal hernia with a 3 cm hernial ring, hernial sac measuring approximately 15 × 5 cm. The sac was opened, revealing a 12 cm-long and 6 mm-diameter cecal appendix without inflammatory signs along with the cecal base adhered to the hernial sac. (Figure 2). The hernial sac contents were reduced, the sac was closed, and a mesh was placed using the Lichtenstein technique. The postoperative course was without complications.

Discussion

Amyand's hernia is a rare condition, with an incidence of 1% among all inguinal hernias (2). Additionally, the concurrent presentation of recurrent inguinal hernia and an appendix within the hernia sac is extremely uncommon (0.01% of total hernioplasties), with few case reports in the literature (3).

Due to its nonspecific symptoms, diagnosis is mostly an intraoperative finding during inguinal exploration, as seen in this case. Diagnosis is challenging because imaging studies and clinical presentation of acute appendicitis can mimic a strangulated hernia, with most cases identified incidentally during surgery. Potential complications include incarceration, strangulation, and perforation (1).

According to Losanoff and Basson, Amyand's hernias are classified into four subtypes: (1) normal appendix within the inguinal hernia, (2) hernia with inflamed appendicitis, (3) hernia with appendiceal perforation, and (4) complications including abscess or malignancy (6).

Regarding diagnosis, physical examination, laboratory tests, and imaging studies are not always useful for the differential diagnosis of Amyand's hernia. Computed tomography may aid in diagnosis; however, it is not usually the first choice for uncomplicated inguinal hernias (8).

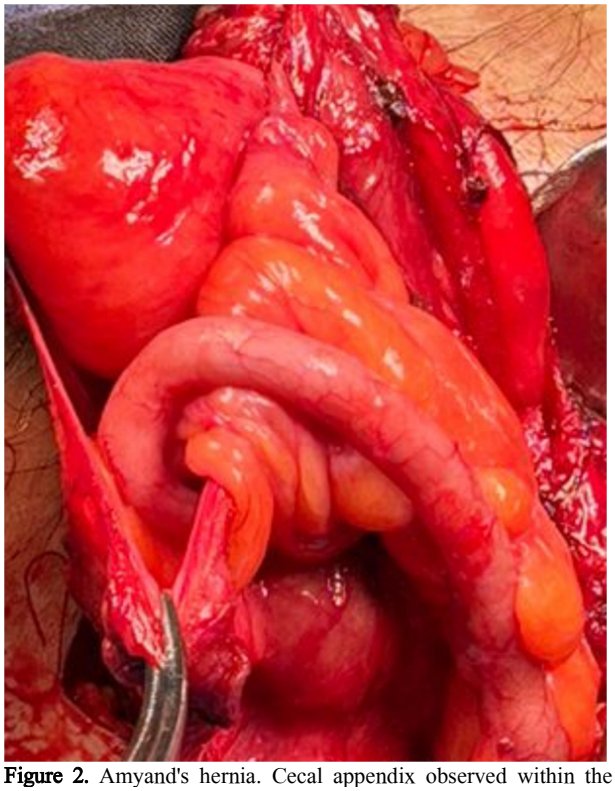

Figure 2. Amyand's hernia. Cecal appendix observed within the hernial sac without inflammatory signs.

Surgical treatment varies depending on the hernia type. For Losanoff type 1, standard hernioplasty is recommended, though the need for appendectomy remains controversial. In type 2, appendectomy and hernia repair without prosthetic mesh are indicated, though biological mesh repair has been described. In type 3, control of the intra-abdominal infection focus is also required, usually via laparotomy. For type 4, a multidisciplinary approach is needed to manage the associated abdominal pathology (7).

There is controversy regarding prophylactic appendectomy and mesh use. In cases of Amyand's hernia with appendicitis or perforation, appendectomy should be performed. When the appendix is normal and non-inflamed, most believe appendectomy is unnecessary. The appendix can be reduced, and the hernia can be repaired with mesh (6).

Conclusion

Amyand's hernia is a rare entity, with an incidence of 1% of all inguinal hernias, and its presence in a recurrent hernia, as in this case report, is even rarer. It is important to understand its presentation forms and classification since this determines the surgical approach. Abdominal CT scan is useful; however, it may not demonstrate the presence of the cecal appendix within the hernial sac. The treatment is surgical and will depend on the surgeon's judgment.

DOI 10.5281/zenodo.15812084

Conflicts of interests

It is declared that there are no conflicts of interest related to the publication of this work.

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 DOI 10.5281/zenodo.15812084