

Appendiceal Stump Abscess: A Rare Complication of Appendectomy

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Abstract

Case Report

The residual appendiceal stump left after an initial appendectomy represents a major risk factor for the development of stump appendicitis, which may lead to an appendiceal abscess. This diagnosis should be considered in any appendectomized patient presenting with right lower quadrant pain to prevent diagnostic and therapeutic delays. Treatment relies on a completion appendectomy. Prevention of this complication requires accurate identification of the appendiceal base, appropriate treatment of the stump by thermal energy to eliminate bacteria within the appendiceal lumen, and ensuring that the stump length does not exceed one centimeter. These measures represent the most effective strategy to reduce the risk of complications associated with a residual appendiceal stump.

Keywords: Appendiceal stump, appendiceal abscess, appendectomy, stercolith.

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INTRODUCTION

- Residual appendiceal stump abscess is a rare complication that may occur as a late sequela of appendectomy.
- It should be considered in the presence of an appendiceal syndrome in a patient with a prior history of appendectomy.
- The diagnosis is based on imaging, and the treatment is exclusively surgical.

OBJECTIVE

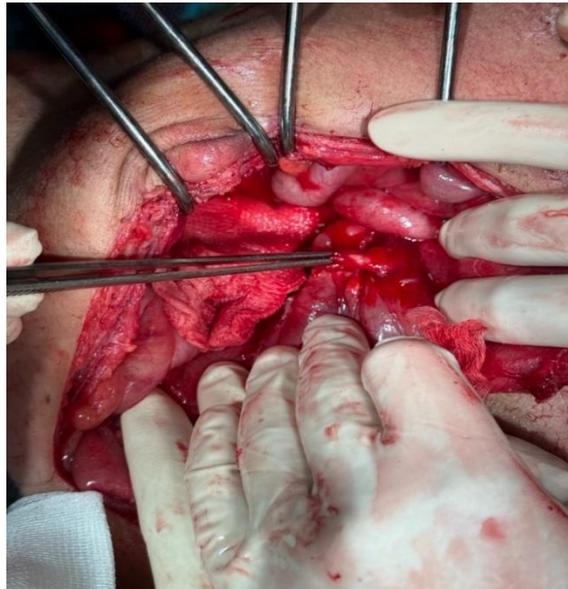
- We report the case of a young patient with an appendiceal stump abscess managed in our department, in order to draw clinicians' attention to this often underrecognized entity, whose delayed diagnosis may lead to serious complications.

OBSERVATION

- This was a 27-year-old patient who had undergone an appendectomy 10 years earlier via a midline approach for appendicular peritonitis. He was admitted to the emergency department with right iliac fossa pain evolving for 5 days, associated with food vomiting, in a febrile context with a temperature of 39 °C.
- Clinical examination revealed a patient hemodynamically and respiratorily stable, with

guarding in the right iliac fossa extending to the hypogastrium.

- Digital rectal examination revealed right latero-rectal tenderness.
- Laboratory investigations showed leukocytosis of 19,000/mm³ with neutrophil predominance, elevated C-reactive protein (CRP) at 200 mg/L, and a negative urine culture (ECBU).
- Abdominal ultrasound demonstrated an echogenic collection in the right iliac fossa.
- Abdominal CT scan revealed a collection in the right iliac fossa with marked mesenteric fat infiltration, along with a right latero-cecal swollen structure measuring 14 mm in diameter, suggestive of an appendiceal stump.
- Re-exploration through the previous midline incision was performed. Surgical exploration revealed a purulent collection in the right iliac fossa and a suppurative residual appendix perforated at its mid-portion with a healthy base. The procedure consisted of completion appendectomy with peritoneal lavage and drainage, and the specimen was sent for histopathological examination.
- Postoperative course was uneventful, and histopathological examination of the surgical specimen concluded inflammation of the appendiceal stump without histological evidence of malignancy.



Intraoperative image of the appendiceal stump. Department of Visceral Surgery, Ibn Tofail Hospital.

DISCUSSION

- Appendectomy is among the most commonly performed procedures in abdominal surgery. Although rare, an appendiceal stump abscess represents a serious complication of this procedure.
- It occurs as a result of inflammation of residual appendiceal tissue after appendectomy. A long appendiceal stump may retain functional mucosa and promote the formation of a fecalith, leading to chronic inflammation that may progress to acute inflammation and perforation.
- Its incidence appears to be increasing with the widespread use of laparoscopic appendectomy.
- Predisposing factors include:
 - Difficulty in identifying the appendiceal base, resulting in incomplete removal of the appendix (an appendiceal stump longer than 1 cm increases the risk).
 - Retrocecal appendicitis.
 - Duplicated appendix.
 - Diverticulitis of the cecal base.
 - Retained fecalith in the right iliac fossa.
 - Inadequate antibiotic therapy.
- The clinical presentation is similar to that of an appendiceal abscess: right iliac fossa guarding, biological inflammatory syndrome, and fever, in a patient with a history of appendectomy.
- The interval between appendectomy and presentation may range from 2 months to 50 years.
- Abdominal CT scan confirms the diagnosis by demonstrating the residual appendiceal stump, determining its length, and identifying the presence of collection or fluid effusion.
- Management is surgical and consists of removal of the residual appendix (completion appendectomy) with peritoneal lavage and drainage.

CONCLUSION

- Clinicians should consider the diagnosis of stump appendicitis in any patient with a history of appendectomy presenting with right iliac fossa pain.
- Accurate identification of the appendiceal base and leaving an appendiceal stump shorter than 1 cm are essential to prevent this complication.

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