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A Case Report: An Atypical 22-Cm-Long Appendix

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Abstract

Introduction:

The appendix is a midgut organ, a small outpouching of the cecum, with variable sizes and anatomical locations. Its inflammation is the most common appendix disease, leading to appendectomy, the most common emergency surgery worldwide.

Case presentation:

Upon arrival at the emergency department, a 30-year-old male reported experiencing abdominal pain for the past three days. The pain started at the periumbilical area and shifted to the right lower quadrant. Laboratory findings showed leukocytosis (11,000 microliters). Non-enhanced computed tomography showed an enlarged thickened appendix measuring 1.1 cm with associated multiple enlarged regional lymph nodes. We started the needed medications, including antibiotics, and shifted the patient to the operating room. We began a laparoscopic approach but could not visualize the appendix, so we switched to an open approach. We found a very long subserosal and retro-cecal inflamed appendix.

Conclusion:

Long acute appendicitis is unusual, and the surgeon must consider all anatomical variations. Along with the history and examination, laboratory investigation and diagnostic images help the surgeon reach the correct diagnosis with early surgical intervention and avoid possible complications.

Introduction:

Anatomical diversities, congenital anomalies, and the mesoappendix characterize the vermiform appendix.1

Its base is constantly a[1]ttached to the cecum. In contrast, the tip can be found in paracolic, retro-cecal, splenic, pelvic, sub-cecal, pre-ilial, and post-ilial positions or toward the sacral promontory.2

The most frequent cause of abdominal pain and the most common appendix disease is acute appendicitis, and appendectomy is one of the most frequent emergency surgeries. Acute

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appendicitis from a lengthy appendix can cause unusual symptoms and atypical presentation, making the diagnosis difficult.1,3

Case report:

We are reporting a case of a 30-year-old male known case of diabetes, hypertension, and chronic kidney disease on medications.

He presented to the emergency department complaining of abdominal pain for three days. The pain started at the periumbilical area and shifted to the right lower quadrant. The pain was colicky, intermittent, and aggravated by movement, cough, and eating without relieving factors. The pain was associated with anorexia, but no nausea, vomiting, change in bowel habits, urinary symptoms, or fever.

The patient had a history of cystitis one week before the presentation, which was managed with oral antibiotics and ultimately improved.

Physical findings revealed typical vital signs, periumbilical and right lower quadrant tenderness, with positive rebound tenderness and positive obturator sign.

Laboratory findings showed leukocytosis (11,000 microliters); other data, apart from a high serum creatinine level (1.9 mg/dL), were within normal limits.

Non-enhanced computed tomography w as done in the emergency department as the differentials initially were ureteric stone versus cystitis, and the report showed:

Enlarged thickened appendix measuring 1.1 cm with associated multiple enlarged regional lymph nodes, with a picture of acute non-complicated appendicitis.

Under the diagnosis of acute appendicitis, we admitted the patient to the hospital, kept him with nothing per mouth, on intravenous fluid, started on IV antibiotics, and prepared for emergency operation. The laparoscopic procedure was initiated and converted to open appendectomy, as we could not visualize the appendix.

With the open procedure, we started with a gridiron incision, and the appendix found retro-cecal and subserosal with a length of 22.1 cm [Fig 1,2], with many adhesions and a minimal amount of pus. We found the appendix inflamed with a healthy base, and we completed an appendectomy.

The patient was discharged postoperatively without complications, and the histopathology result showed acute supportive appendicitis.

Ten days postoperative, the patient visited the clinic and was in good condition and discharged.

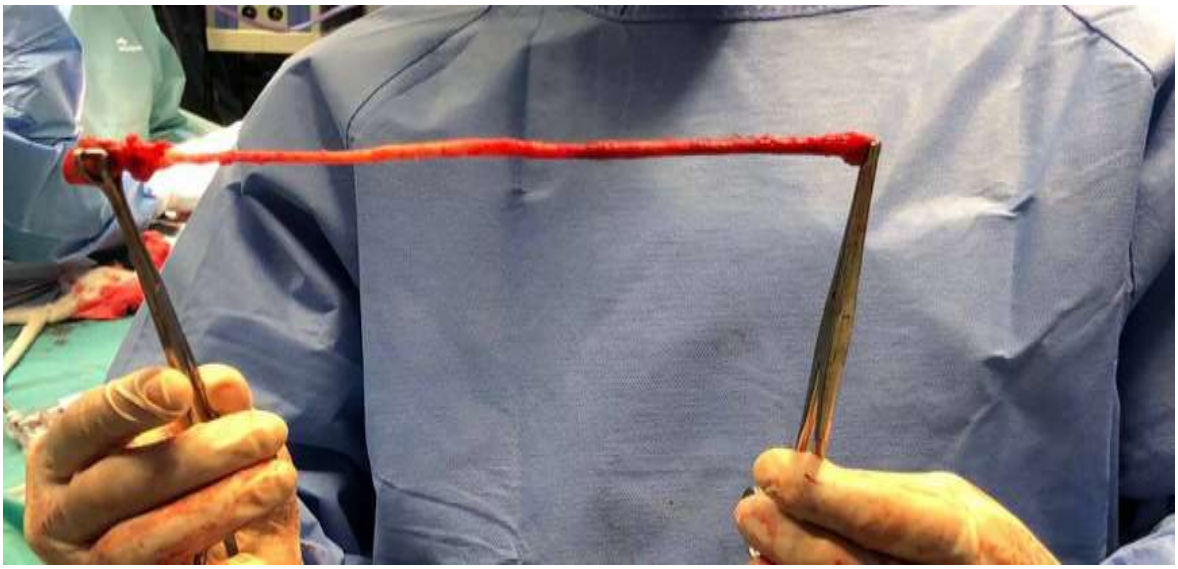

Figure 2

Discussion:

The appendix is a midgut organ, a small outpouching of the cecum, with variable size ranging between 5-35 cm with an average of 8-9 cm in length in adults, while the tip may be found most commonly retro-cecal intraperitoneal in 60% of individuals, pelvic in 30% and retroperitoneal in 7-10%. Appendicitis is caused by luminal obstruction and is vulnerable to this etiology due to the small diameter of the lumen to the length, leading to progressive distension of the appendix with the ongoing mucus secretion within it, in which the venous drainage impaired and mucosal ischemia and subsequent full-thickness ischemia.4

The longest appendix reported was 28 cm found in a cadaver of medical school during routine dissection for a medical undergraduate, while the longest reported appendix removed from a living person was 26 cm.5,6

In Our case, the patient has an unusually long appendix measuring 22.1 cm, making it one of the longest-reported appendices in the world.

A lengthy inflamed appendix might cause a confusing picture of symptoms, making it difficult to diagnose.

However, in our case, the pain was localized to the periumbilical and right iliac fossa, along with laboratory investigations and diagnostic images, which all helped to reach the diagnosis even with the unusual length.

Conclusion:

The most common appendix disease is acute appendicitis, and the most common emergency operation is appendectomy. Long acute appendicitis is unusual, and the surgeon must consider all anatomical variations. Along with the history and examination, laboratory investigation and diagnostic images help the surgeon reach the correct diagnosis with early surgical intervention and avoid possible complications.

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