

Mucinous Adenocarcinoma of the Appendix on Complete Common Mesentery: Case Report

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Abstract **Case Report**

Common mesentery in adults is a rare phenomenon, usually presenting with acute or chronic complications. We report the case of a 54-year-old female patient with no notable medical history, admitted to our department for the management of left-sided appendiceal mucocoele on complete common mesentery. The diagnosis was made incidentally during medical imaging for chronic abdominal syndrome. The treatment involved right hemicolectomy with mechanical ileocolic anastomosis. Pathological analysis revealed mucinous adenocarcinoma of the appendix.

Keywords: mesentery, chronic complications, diagnosis, anastomosis.

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INTRODUCTION

Common mesentery results from an anomaly in the rotation of the digestive tube. It is characterized by the persistence of an embryonic anatomical arrangement due to abnormal rotation of the primitive umbilical loop, forming a common mesentery for the entire intestinal loop and an extremely short mesentery root [1]. This incomplete rotation is often associated with a lack of fusion. The cessation of rotation of the vitelline loop at 90° results in complete common mesentery, with the colon located on the left and the mesentery and small intestine on the right. Left-sided appendiceal location associated with complete common mesentery is extremely rare, and they are even rarer [2]. These atypical presentations can lead to diagnostic delays and potentially serious complications [3].

OBSERVATIONS

A 54-year-old menopausal female patient with no significant medical history presented with chronic left-sided hypogastric discomfort. Clinical examination revealed tenderness without defense or contracture in the hypogastric region. Blood tests were normal. Abdominal CT scan showed an extra-luminal mass adjacent to the sigmoid and descending colon, well-defined, with hypodense content of liquid density, enhanced wall, containing calcifications within it, measuring 45x64x70 located in the left iliac fossa on complete common mesentery (Figure 1 and 2). A

multidisciplinary meeting led to the diagnosis of left-sided appendiceal mucocoele with complete common mesentery. Surgical management involved right hemicolectomy with side-to-side mechanical ileocolic anastomosis (Figure 3). Pathological analysis revealed mucinous adenocarcinoma infiltrating the subserosa. The patient's recovery was favorable, and she was discharged after four days. She was followed up seven days after the procedure and received adjuvant chemotherapy.

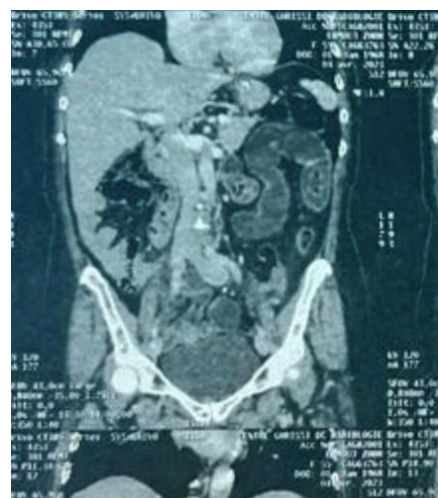


Figure 1: CT section showing a complete common mesentery

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Figure 2: CT section showing a mass in the left iliac fossa



Figure 3: showing a mass in the cecum located at the level of the left iliac fossa

DISCUSSION

During embryonic development, the intestine undergoes reintegration, rotation, and fusion processes. When these processes are incomplete or absent, they can lead to malpositions of the digestive tube, resulting in digestive complications. These malformations can affect one in 500 births [4]. They often remain asymptomatic and undiagnosed. The persistence of primitive common mesentery in adults is usually well-tolerated [5]. It affects only 0.2% to 0.5% of the adult population and is generally asymptomatic. 85% of cases of common mesentery are diagnosed during the first

two weeks of life. There are few studies on late acute complications in adults in the literature [6]. In adults, diagnosis may occur incidentally during radiological examinations or may be revealed during appendectomy for ectopic appendicitis [7]. The difficulty of diagnosis is due to the nonspecific symptoms. Our patient presented with vague chronic pain, prompting cross-sectional imaging to investigate unexplained abdominal pain. Diagnostic challenges were due to a clinical picture consistent with several pathologies. Indeed, the main differential diagnoses were pyelonephritis and sigmoid diverticulitis. The contribution of CT scans is essential for accurate diagnosis, especially in cases of atypical abdominal pain syndromes [8].

It is superior to ultrasound, particularly in individuals over 40 years old [9]. Our patient underwent an abdominopelvic CT scan, which revealed a left-sided appendiceal mucocoele on complete common mesentery. The treatment is primarily surgical, and surgical excision of the appendiceal mucocoele can be performed via laparotomy or laparoscopy. Surgical procedures include:

- Appendectomy
- Appendectomy extended to the cecal base
- Right hemicolectomy when the lesion suggests malignancy or for curative purposes [10].

Our patient underwent midline laparotomy, and the surgical procedure involved right hemicolectomy with ileocolic anastomosis. Pathological analysis of the complex specimen indicated mucinous adenocarcinoma. This tumor accounts for 50% of appendiceal tumor cases [11].

CONCLUSION

Although a rare condition, the discovery of a persistent right iliac fossa mass or chronic appendicular syndrome should raise suspicion of appendiceal mucocoele. Imaging (abdominal ultrasound or contrast-enhanced abdominopelvic CT) is recommended. Left-sided symptoms should prompt consideration of ectopic positioning."

Conflict of interest: The authors declare no conflicts of interest.

Authors' Contributions: All authors have contributed to the development of the work and endorse the document. They have also read and approved the final version of this manuscript.

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