CASE REPORT

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A Rare Cause of Abdominal Pain and Diarrhea-cystic Lymphangioma Located in the Descending Colon

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ABSTRACT

Cystic lymphangiomas of the colon are rare, benign tumors that arise from the lymphatic vessels and are typically asymptomatic. These lesions are often discovered incidentally during imaging or endoscopic evaluations for unrelated conditions. We report a case of a 57-year-old woman who presented with abdominal pain and diarrhea. Imaging studies revealed a submucosal cystic mass in the descending colon, and endoscopic evaluation confirmed the presence of a cystic lesion. Histopathological examination following biopsy confirmed the diagnosis of cystic lymphangioma. The lesion was successfully resected via colonoscopy, and the patient had an uneventful recovery. This case highlights the importance of considering cystic lymphangiomas in the differential diagnosis of gastrointestinal masses and underscores the value of endoscopic techniques for diagnosis and treatment.

Keywords: Endoscopic submucosal dissection, Colon, Cystic lymphangioma

INTRODUCTION

Lymphangiomas are rare, benign tumors originating from the lymphatic vessels, most commonly found in the skin and soft tissues. Although they can occur anywhere in the body, their presence in the gastrointestinal tract, particularly in the colon, is extremely rare [1]. Cystic lymphangiomas are often asymptomatic and are frequently discovered incidentally during diagnostic imaging or endoscopy for other gastrointestinal issues. When symptomatic, they can present with a variety of non-specific symptoms such as abdominal pain, bloating, or gastrointestinal bleeding. In severe cases, complications such as perforation or intestinal obstruction can occur.

Diagnosis is generally made through imaging studies such as ultrasound, computed tomography (CT), or magnetic resonance imaging, which reveal characteristic cystic masses. However, a definitive diagnosis requires a histopathological examination of tissue obtained via biopsy, which demonstrates the characteristic lymphatic spaces lined by endothelial cells. Treatment of cystic lymphangiomas in the colon is typically surgical or endoscopic. While small, asymptomatic lesions may be observed, larger, or symptomatic lesions usually require resection. Colonoscopy provides a minimally invasive method for both diagnostic evaluation and therapeutic intervention.

CASE REPORT

A 57-year-old female patient was admitted with a chief complaint of lower abdominal discomfort, present for over one year and worsened over the past week, without any identifiable precipitating factors. She denied associated symptoms such as nausea, vomiting, or melena and did not seek medical attention at that time. One week before admission, the abdominal discomfort acutely worsened and was accompanied by diarrhea. The patient had no known history of hypertension, coronary artery disease, or diabetes, and denied any prior history of infectious diseases, including hepatitis and tuberculosis. On physical examination, the abdomen was soft and non-tender, with no evidence of abdominal wall varicosities, rebound tenderness, fluid thrill, succussion splash, or palpable masses. Bowel sounds were within normal limits. Laboratory investigations, including complete blood count,

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renal function tests, coagulation profile, cardiac enzyme panel, troponin, alpha-fetoprotein, carcinoembryonic antigen, and carbohydrate antigen 19-9, were unremarkable.

Contrast-enhanced CT of the abdomen revealed a cystic lesion located within the submucosal layer of the descending colon (Figure 1a and b). The patient subsequently underwent endoscopic submucosal dissection (ESD). Intraoperatively, a translucent submucosal elevation was observed in the descending colon, characterized by a soft consistency and smooth surface (Figure 1c). The lesion was completely resected, measuring approximately 3 cm×2 cm. Histopathological analysis demonstrated a cystic structure within the submucosa, partially septated and lined by a single layer of flattened endothelial cells, consistent with a diagnosis of cystic lymphangioma (Figure 2).

On the second postoperative day, the patient experienced a temperature peak of 39 °C, along with elevated blood levels of hypersensitive C-reactive protein (26.65 mg/L). Additionally, the white blood cell count was 11.44×10^9/L with a neutrophil percentage of 90.4%. Despite treatment with the anti-infective agent ornidazole, no significant improvement was observed. Another abdominal CT scan was performed, which revealed the presence of gas and exudation within the abdomen. Consequently, a bowel perforation was diagnosed, leading to the decision to perform an emergency laparotomy and temporary colostomy. At the two-week postoperative follow-up, the surgical wound had healed well and the patient was asymptomatic, discharged in stable condition.

DISCUSSION

Lymphangiomas are rare benign lesions, with approximately 95% of cases occurring in the head and neck region. Abdominal lymphangiomas are commonly found in the mesentery and retroperitoneum. Lymphangiomas involving the bowel wall are less frequent, accounting for around 0.7% of all abdominal lymphangiomas, and they typically manifest in the right colon. In adults, bowel wall lymphangiomas are usually secondary and may arise as a result of lymphatic endothelial cell proliferation stimulated by inflammation or previous surgical interventions. Lymphangiomas of the colon can be broadly classified into three types: simple (capillary), spongy, and cystic [2], with the cystic subtype representing approximately 70% of cases. Clinical manifestations of cystic lymphangioma of the colon are non-specific and commonly include abdominal pain, vomiting, and constipation. Complications such as intestinal obstruction, intussusception, and gastrointestinal bleeding are infrequent occurrences [3]. Endoscopic ultrasound is the preferred method for evaluating colonic cystic lymphangiomas. These lesions typically appear as submucosal, well-circumscribed, completely encapsulated cysts without echogenicity. CT imaging commonly reveals a watery cystic mass with thin walls, showing no significant enhancement on contrast-enhanced

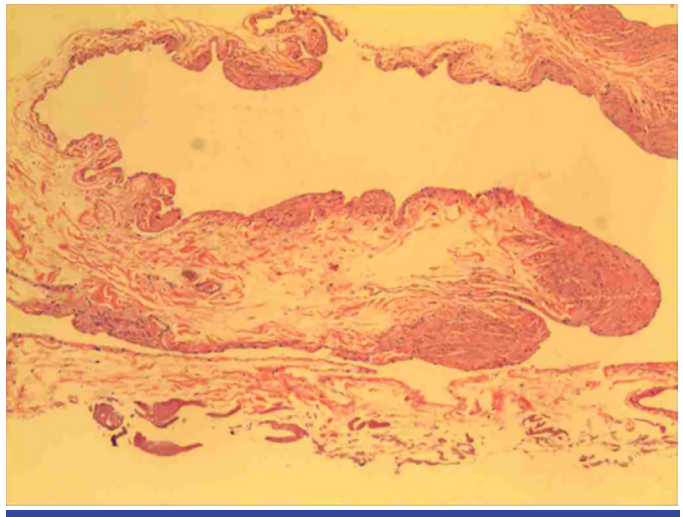

Figure 2. Pathological findings. A cystic structure was observed within the submucosa, with partial septation in some areas. The cysts were lined by a single layer of flattened endothelial cells, consistent with a diagnosis of cystic lymphangioma

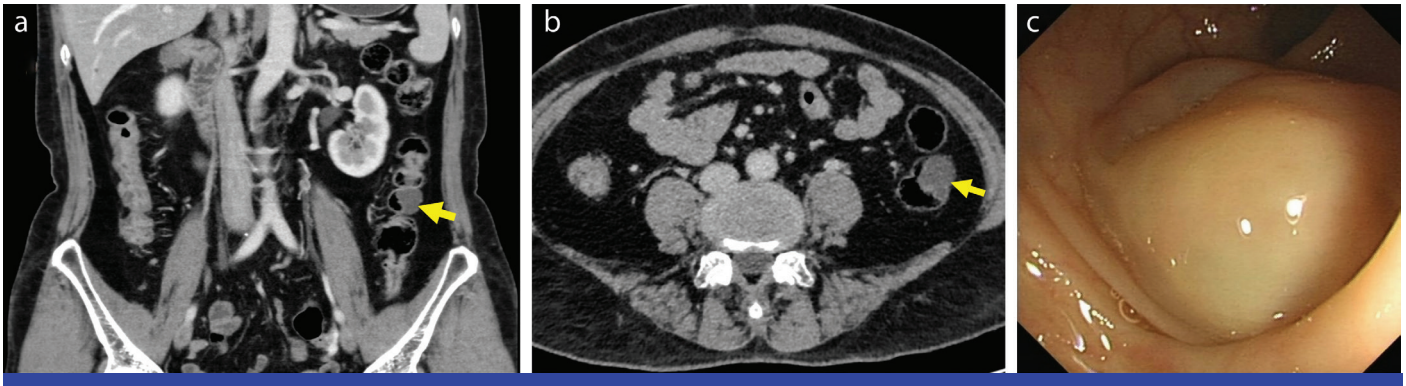

Figure 1. CT and endoscopy findings. a) Coronal and (b) axial CT images revealed a cystic lesion (yellow arrow) in the wall of the descending colon; (c) a submucosal eminence in the colon with a smooth and transparent surface

CT: Computed tomography

scans. However, they can resemble other cystic foci in the colon, which must be distinguished to avoid misdiagnosis. Mesenteric cysts, though well-circumscribed and fluid-filled like lymphangiomas, are located outside the colon wall and are often attached to the mesentery, differentiating them from intramural cysts. Gastrointestinal stromal tumors may also show cystic changes but are usually located in the muscularis propria, whereas lymphangiomas arise from the submucosa. Additionally, congenital intestinal duplication cysts are typically lined by gastrointestinal epithelium, a feature absent in lymphangiomas. Infectious or inflammatory cystic lesions, such as abscesses or granulomas, may present with more heterogeneous features and associated systemic symptoms. Accurate diagnosis often requires a combination of clinical assessment, imaging, and histopathological examination to confirm the benign nature of cystic lymphangioma and rule out other conditions. Colonic cystic lymphangioma is a rare benign malformation, and the decision for active intervention depends on clinical symptoms. Endoscopic resection is a suitable approach for small lesions measuring 2 to 3.5 cm [4]. However, it is essential to be cautious about the potential complications of colon perforation.

In the present case, colon perforation occurred after ESD, necessitating urgent surgical intervention. Laparoscopic surgery may be considered as an alternative to mitigate complications such as recurrent infection, progressive growth, rupture, or bleeding.

Ethics

Informed Consent: Informed consent was obtained from the patient for the anonymous use and publication of clinical and imaging data.

Footnotes

Authorship Contributions

Concept: W.Y., C.H., Design: W.Y., C.H., Data Collection or Processing: W.Y., C.H., Analysis or Interpretation: W.Y., C.H., Literature Search: W.Y., C.H., Writing: W.Y.

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