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Sclerosing Mesenteritis Revealed by Rectal Bleeding in a 41-Year-Old Woman: The Contribution of Diagnostic Imaging

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Abstract | **Case Report**

Sclerosing mesenteritis is a rare and often misdiagnosed inflammatory condition of the mesenteric fat with nonspecific symptoms. We report the case of a 41-year-old woman admitted for profuse rectal bleeding, an exceptional resentation of this disease. Endoscopic findings were inconclusive, while CT angiography revealed a retractile, hypodense mass at the mesenteric root encasing the superior mesenteric vessels, with associated varices, mesenteric fat infiltration, and bowel wall thickening. These features were highly suggestive of advanced sclerosing mesenteritis. Surgical exploration confirmed the diagnosis, and a right hemicolectomy was performed with good clinical evolution. Rectal bleeding was attributed to venous compression and collateral mesenteric varices. This case highlights the crucial role of CT in diagnosing sclerosing mesenteritis and guiding treatment, especially in atypical presentations that may mimic malignancy.

Keywords: Sclerosing Mesenteritis, Abdominopelvic CT Angiography, Rectal Bleeding.

INTRODUCTION

Sclerosing mesenteritis is a rare and often underrecognized entity encompassing a spectrum of chronic inflammatory diseases of the mesentery, including mesenteric panniculitis, mesenteric lipodystrophy, and retractile mesenteric fibrosis. Its clinical presentation is variable and nonspecific, making diagnosis challenging. Imaging, particularly CT, plays a central role in detecting characteristic abnormalities and guiding diagnosis. We report the case of a 41-year-old woman admitted for profuse rectal bleeding, whose work-up revealed sclerosing mesenteritis with an atypical presentation.

CLINICAL CASE

A 41-year-old woman with no significant medical history was admitted for profuse rectal bleeding that had persisted for four days, unrelated to defecation, with no fever but with general health deterioration. On clinical examination, she was conscious, hemodynamically and respiratory stable. She had conjunctival pallor, a soft abdomen, and digital rectal examination revealed a gloved finger stained with bright red blood.

Endoscopic examinations, including upper GI endoscopy and full colonoscopy, were unremarkable except for the presence of blood coating the colon. Initial blood tests showed severe anemia (Hb: 7.2 g/dL), leukocytosis (15,800/mm³), moderately elevated CRP (7 mg/L), normal platelet count (274,000/mm³), and a prothrombin time of 100%.

An abdominopelvic CT angiography was performed as part of the diagnostic work-up. It revealed a hypodense, poorly defined, retractile mass at the mesenteric root, non-enhancing after contrast injection, measuring 48 x 32 mm (anteroposterior x transverse), with a cranio-caudal extension of about 10 cm (L1 to L4). This mass encased the superior mesenteric vessels and their branches, compressed the superior mesenteric vein which appeared thin, with areas of non-opacification and the presence of diffuse mesenteric varices, notably in the paracecal region. On the right, it was in contact with the lumbar ureter, causing major dilatation of the right renal pelvis and ureter, on a small-sized right kidney.

Diffuse mesenteric infiltration with a “comb sign” appearance and numerous lymphadenopathies were also noted. Imaging showed regular circumferential thickening of ileal loops with target-like enhancement,

along with moderate peritoneal effusion, notably around the liver, in the right iliac fossa, and the pelvic cavity.

The appearance was suggestive of sclerosing mesenteritis.

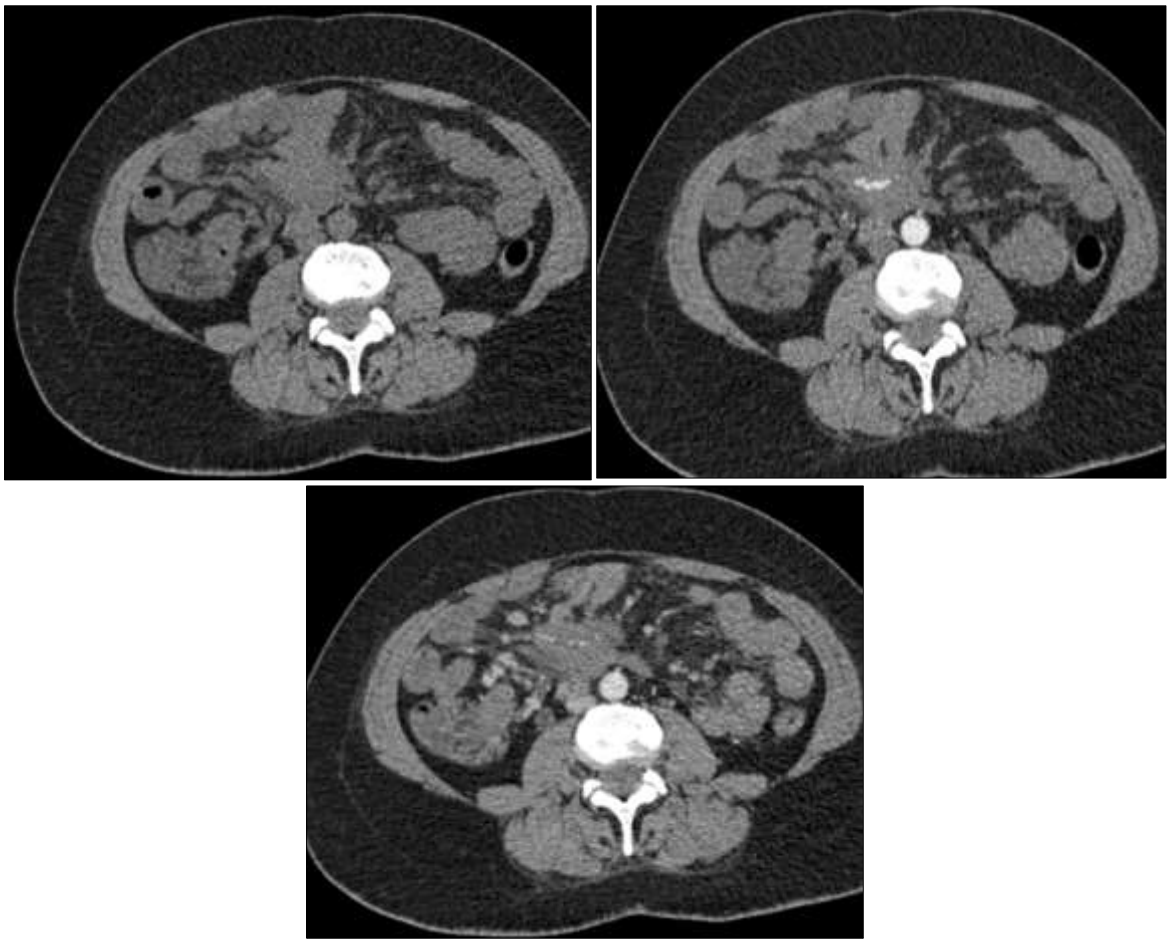

Figure 1: Axial CT images in the parenchymal window, without contrast injection (a), in the arterial phase (b), and in the portal venous phase (c), show a hypodense, ill-defined, retractile mass at the root of the mesentery, with no significant enhancement after contrast administration. The mass encases the superior mesenteric vessels and their branches, and compresses the superior mesenteric vein, which appears attenuated

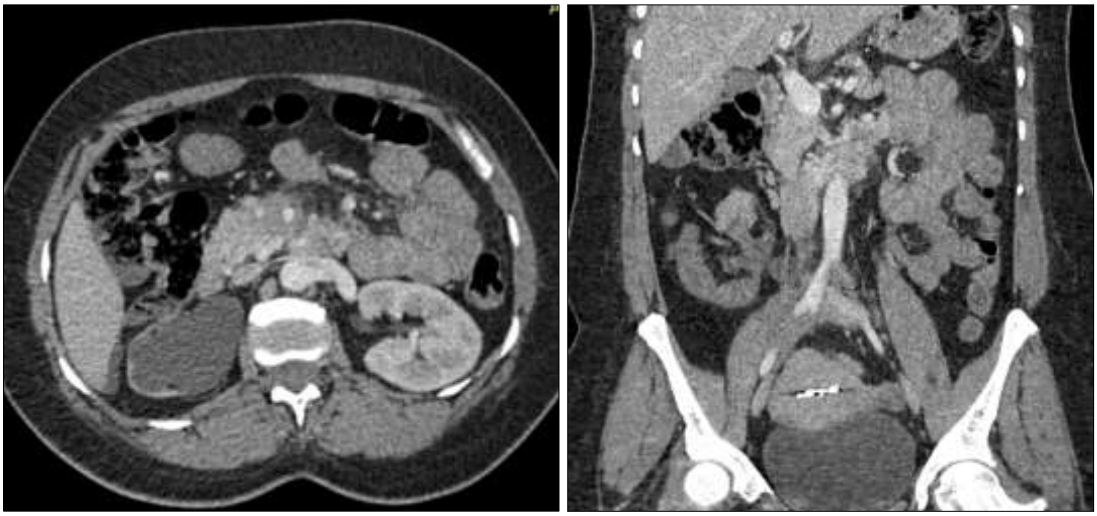

Figure 2: Axial (a) and coronal (b) CT images in the parenchymal window during the portal venous phase show the mass in contact with the lumbar ureter, causing marked dilatation of the pyelocaliceal system and ureter, associated with a small right kidney

Surgery was performed. Intraoperative exploration revealed a fibrous mass at the mesenteric root encasing mesenteric vessels with overlying varices. A right hemicolectomy including part of the mass was performed, with ileocolic anastomosis and ligation of the ileocolic artery, right superior colic artery, and varices. Peritoneal fluid sampling was sterile. Postoperative recovery showed marked clinical improvement.

DISCUSSION

Sclerosing mesenteritis (SM), also known as mesenteric panniculitis or retractile mesenteric fibrosis depending on the dominant histologic presentation, is a rare entity within the spectrum of fibroinflammatory diseases of mesenteric fat tissue [1]. Its exact incidence is unknown, but estimated at less than 1% in general abdominal CT series [2].

The pathogenesis remains poorly understood. Several hypotheses include postoperative, post-traumatic, autoimmune, infectious (notably tuberculosis or Yersinia), or neoplastic mechanisms (especially lymphomas or digestive carcinomas) [3, 4]. Some cases have been associated with conditions such as celiac disease, systemic lupus erythematosus, or colon cancer [5].

Clinical Presentation and Reported Cases

SM is often asymptomatic, incidentally discovered during imaging. When symptomatic, it may present with various complaints: abdominal pain, palpable mass, nausea, vomiting, weight loss, bowel habit disturbances, or fever [6]. Presentation with rectal bleeding, as in our case, is exceptional.

In a series of 92 cases by Daskalogiannaki *et al*., [2], only 10% were symptomatic, mostly with diffuse abdominal pain. None had digestive bleeding. To our knowledge, very few cases in the literature describe SM presenting with gastrointestinal bleeding. In 2014, Canyigit *et al*., [7], reported a case of SM complicated by segmental portal hypertension, suggesting mesenteric venous compression, which in extreme cases may lead to hemorrhagic signs. In our case, compression of the SMV and the presence of paracecal mesenteric varices may explain the rectal bleeding.

Role of Imaging

Imaging, particularly contrast-enhanced CT, is crucial for diagnosis. Three forms are described based on histologic predominance:

- **Mesenteric panniculitis**: dominated by inflammation of adipose tissue with diffuse fatty infiltration, more common in early stages.
- **Mesenteric lipodystrophy**: intermediate stage with mixed fibrosis and inflammation.
- **Retractile fibrosis**: late stage, with predominant fibrous tissue causing mesenteric retraction, vascular stenosis, and adhesions [3].

In our case, imaging was typical of an advanced fibrotic form: a retractile fibrous mass at the mesenteric root encasing the superior mesenteric vessels, causing compression, collateral varices, and a comb sign appearance.

Several CT features are suggestive [4-8]:

- Poorly defined fatty mass centered in the mesentery, variable density depending on fibrosis/inflammation;
- Peripheral hyperdensity or pseudocapsule ("halo sign");
- Linear infiltration of secondary vessels (“comb sign”);
- Mesenteric lymph nodes (<1 cm, sometimes calcified);
- Bowel loops spared, unlike mesenteric tumors;
- Possible peritoneal effusion.

MRI may help characterize fibrosis (T1 and T2 hypointensity, delayed progressive enhancement) [9], but is not essential for diagnosis.

Similar Cases in the Literature

A case by Sharma *et al*., [6], showed a mesenteric mass encasing superior mesenteric vessels, initially suspected to be lymphoma, later confirmed histologically as SM. Another case by van Putte-Katier *et al*., [10], described SM with major retractile fibrosis causing right ureteral stenosis, similar to our case, showing that adjacent structures may be affected.

Finally, Horton *et al*., [4], emphasized that the combination of the following signs is highly specific: central mesenteric mass, hyperdense peripheral halo, lymphadenopathies, and encased mesenteric vessels without destruction. All of these were present in our patient, supporting the diagnosis.

Management

Treatment depends on symptoms. In the absence of compressive signs or progression, observation may suffice. Symptomatic forms may benefit from medical therapy (corticosteroids, colchicine, immunosuppressants, thalidomide, tamoxifen) with variable effectiveness [1-5]. Surgery is reserved for complications: obstruction, ischemia, or diagnostic uncertainty. In our patient, surgery served both diagnostic and therapeutic purposes, managing a vascular complication with suspected secondary GI bleeding.

CONCLUSION

Sclerosing mesenteritis is a rare fibroinflammatory condition of the mesentery with often nonspecific clinical presentation. Contrast-enhanced CT is essential for diagnosis. Certain CT signs—retractile fatty mesenteric mass, encased mesenteric vessels without destruction, comb sign, peripheral

pseudocapsule, and intramesenteric lymphadenopathies—are highly suggestive and well-documented in the literature [4-8]. In our case, the unusual presentation with profuse rectal bleeding is explained by superior mesenteric vein compression and the development of mesenteric varices, a rarely reported complication [7]. This case highlights the crucial role of imaging in avoiding diagnostic pitfalls, assessing lesion extent, guiding treatment, and differentiating SM from digestive tumors or lymphomas [2-6].

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