Small-Bowel Lymphoma: The Hidden Cause of Obscure Gastrointestinal Bleeding

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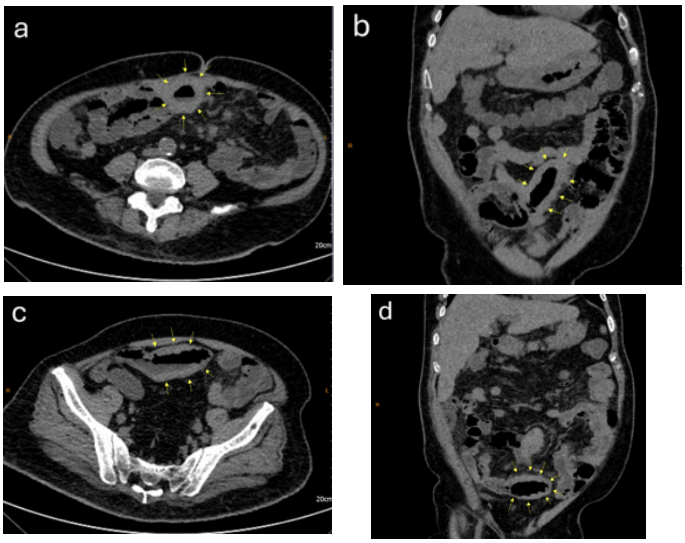

Figure 1. Non-contrast whole-abdomen CT scan demonstrating segmental small bowel wall thickening ileitis involving the proximal and distal ileum (approximately 6 cm) with surrounding mesenteric fat stranding.

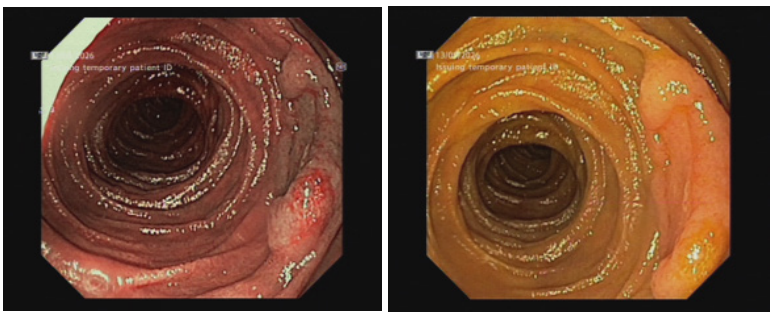

Figure 2. Antegrade enteroscopy revealing a mass with central ulceration in the proximal ileum. Five biopsies were taken.

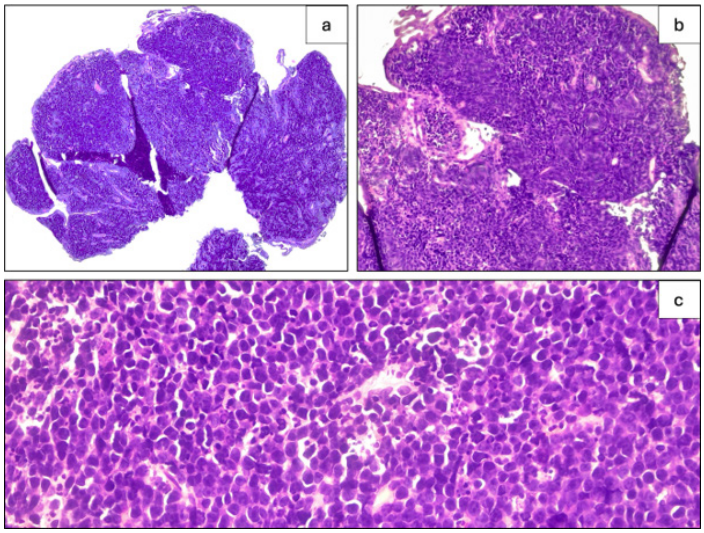

Figure 3. Histopathological examination of the proximal ileal biopsy specimen obtained from the ileal mass revealed (a-b) small intestinal mucosa infiltrated by a diffuse and highly cellular tumor (a. 40x, b.100x) (c) neoplastic cells were small to medium in size with round-to-oval hyperchromatic nuclei and scant cytoplasm (1000x).

Obscure gastrointestinal bleeding (OGIB) is a persistent GI tract bleeding with no evidence of bleeding etiology from initial esophagogastroduodenoscopy (EGD) and colonoscopy (CS). OGIB has a prevalence of approximately 5% in all cases of GI bleeding.[1] In 75% of cases of OGIB, the most common etiology was from the small intestine.[2] The rest of the cases were evaluated with second-look endoscopy (35-75%) and repeated colonoscopy(6%) that revealed non-small bowel origin.[3,4]

In our case, a 67-year-old male came to the emergency department with a 4-day history of diarrhea and melena. The patient denied any history of hematemesis, fever, cough, shortness of breath, abdominal pain, seizures, or altered mental status. A history of weight loss could not be reliably ascertained from the patient or family. Appetite and oral intake were preserved. One month before his admission, the patient had his first melena episode. Laboratory evaluation was conducted and revealed a hemoglobin level of 5 g/dL, suggesting severe anemia. Since then, he has received 16 packs of PRC transfusions. On the current admission, the patient's weight was normal. He appeared moderately ill but was fully conscious. Vital signs were stable, and physical examination was normal.

Laboratory investigations on admission demonstrated a hemoglobin of 10.7 g/dL and hematocrit of 32.3%, consistent with mild anemia in the context of recent transfusion. The leukocyte count was 8,030/µL, and the platelet count was 339,000/µL. Serum electrolytes revealed hyponatremia (sodium 130 mmol/L), with potassium 3.8 mmol/L and chloride 100 mmol/L within normal limits. Liver function tests were preserved (AST 27 U/L; ALT 15 U/L). Renal function demonstrated mild impairment with urea 49 mg/dL, creatinine 1.49 mg/dL, and an estimated glomerular filtration rate of 51 mL/min/1.73 m^2. Serum albumin was significantly reduced at 2.21 g/dL. Coagulation parameters were within normal limits. Serological screening for hepatitis B surface antigen, human immunodeficiency virus, and hepatitis C virus was all non-reactive.

Chest radiography revealed no acute cardiopulmonary abnormalities, with the incidental finding of aortic elongation. Electrocardiography demonstrated a normal sinus rhythm at 80 beats per minute, without evidence of ischemic changes or conduction abnormalities. Colonoscopy reported the presence of internal hemorrhoids and a polyp in the ascending colon.

The patient was examined with a CT scan as the first diagnostic method to identify the

source of bleeding and guide the subsequent therapy. Although a contrast-enhanced CT scan was recommended, a non-contrast CT scan was performed in this patient because vascular access could not be adequately established.[5] A non-contrast whole-abdomen CT scan was conducted and revealed segmental small bowel thickening involving the proximal and distal ileum over an approximately 6-cm segment, with surrounding mesenteric fat stranding (**Figure 1**).

The radiological findings of small-bowel lymphoma commonly involve a single loop of bowel, with 5-20 cm of its length demonstrating bowel wall thickening. Aneurysmal dilatation of the bowel wall, which was found in our case, occurs in 30% of cases and is a sign of tumour aggression. It indicates the presence of disruption of the muscularis propria and the autonomic nerve plexus with consequent loss of contractility and structural integrity. This process is particularly characteristic of aggressive lymphomas such as diffuse large B-cell lymphoma (DLBCL). Regional lymph node enlargement in approximately 50% of cases, but was not found in this case.[6,7]

Further evaluation was pursued with device-assisted enteroscopy: antegrade enteroscopy revealed a mass with central ulceration in the proximal ileum, from which five biopsies were obtained (**Figure 2**). Retrograde enteroscopy could not be completed due to the colon being filled with greenish feces, and the procedure was not continued.

Histopathological examination of the proximal ileal biopsy specimen obtained from the ileal mass revealed small intestinal mucosa infiltrated by a diffuse and highly cellular tumor. The neoplastic cells were small to medium in size with round-to-oval hyperchromatic nuclei and scant cytoplasm. Mitotic figures were readily identified. Focal fibrosis of the lamina propria was present, while the intestinal glands showed no evidence of dysplasia. These findings were consistent with a malignant round cell neoplasm and raised suspicion for non-Hodgkin lymphoma (**Figure 3**).

Extranodal non-Hodgkin lymphoma mostly affects the gastrointestinal tract in 30%-40% of cases. The most frequently involved site is in the stomach (50-60%), small bowel gastrointestinal lymphomas (20-30%), and 15%-20% of all small bowel malignancies. Regardless of its prevalence, small bowel lymphoma is still considered rare and can cause intestinal bleeding in 2% to 22% of cases.[8–10]

This case highlights the importance of early diagnosis in evaluating OGIB. Prompt recognition of small bowel disorder as the cause of OGIB through CT imaging and enteroscopy is essential to initiate early treatment, prevent further hemorrhagic complications, and improve overall prognosis.

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