

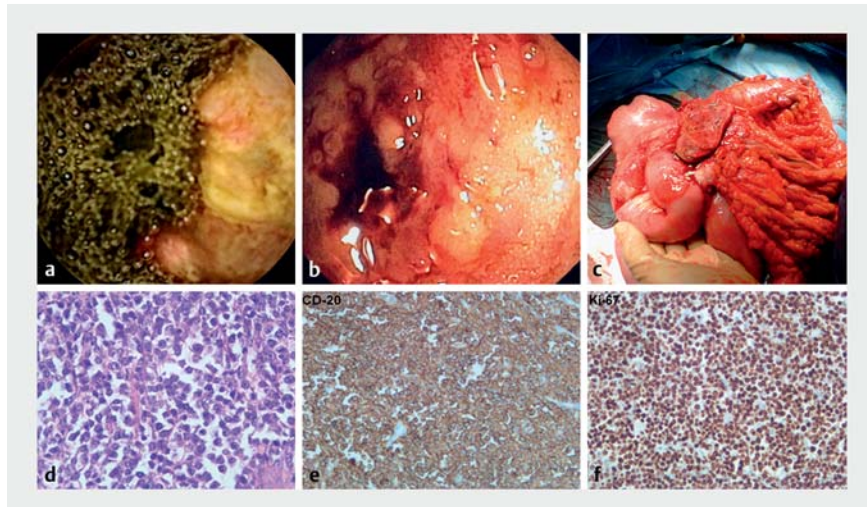
## Small-bowel B-cell lymphoma presenting as autoimmune hemolytic anemia and severe obscure gastrointestinal bleeding



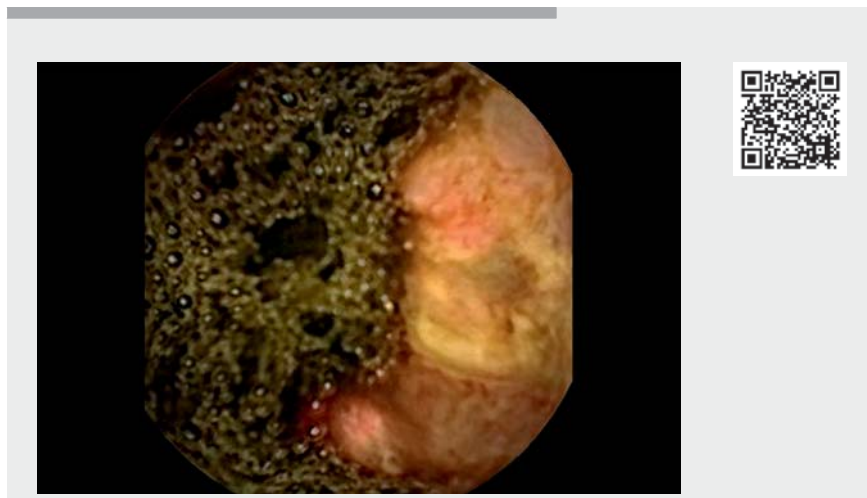
A 75-year-old man was admitted to our hospital because of worsening chronic hemolytic anemia and hematochezia. His medical history was significant for diabetes mellitus, coronary artery disease, and autoimmune hemolytic anemia (AIHA). Idiopathic AIHA was diagnosed 3 years prior to the current admission and was warm antibody-mediated, and direct antiglobulin test (Coombs test) positive. Initially he was placed on steroids, but due to recurrent hemolytic episodes, he was subsequently placed on different immunosuppressive agents, including azathioprine, cyclophosphamide, and mycophenolate mofetil.

Esophagogastroduodenoscopy and colonoscopy were unremarkable. Capsule endoscopy showed an ulcerated mass (► **Fig. 1 a**). A retrograde deep enteroscopy confirmed a large tumor in the ileum (► **Fig. 1 b**). The patient underwent surgical resection of the mass (► **Fig. 1 c**). Histopathology revealed diffuse large B-cell lymphoma (DLBCL), an aggressive subtype of non-Hodgkin lymphoma (NHL) (► **Fig. 1 d–f**, ► **Video 1**).

The Coombs test was negative 2 months later, suggesting that the mass was the source of the autoantibodies. Combination R-CHOP therapy (rituximab, cyclophosphamide, doxorubicin hydrochloride, vincristine sulfate, and prednisone) resulted in remission of the lymphoma. This case highlights the occurrence of two conditions leading to severe anemia. Whenever an AIHA is present, the clinician must be aware of lymphomas. Interestingly, AIHA may occur prior to NHL (from 3 months to 13 years before lymphoma diagnosis), concurrent with (6 months before until 6 months after NHL diagnosis), at relapse of NHL, or in complete remission after successful treatment of the NHL; however, the majority of cases occur concurrently [1–3]. The most common primary small intestine



► **Fig. 1** Patient investigations. **a** Capsule endoscopy showing an ulcerated mass. **b** On enteroscopy, a stenotic, ulcerated, and bleeding mass was evident. **c** Operative photograph showing a large mass involving the terminal ileum. **d** Hematoxylin and eosin stain revealed neoplastic lymphoid cells. **e** The CD-20 marker confirmed the B-cell origin of the lymphoma. **f** Positive staining for Ki-67 in more than 90% of the cells.



► **Video 1** Small-bowel B-cell lymphoma presenting as autoimmune hemolytic anemia and severe obscure gastrointestinal bleeding.

lymphoma is DLBCL (58% of cases) and perforation is a frequent complication. Endoscopically, AIHA can be of polypoid type in 25% of cases, ulcerative type in 54%, multiple polyposis in 5%, diffuse-

infiltrating type in 6%, and mixed type in 10% of patients [2, 3].

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## Competing interests

The authors declare that they have no conflict of interest.

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