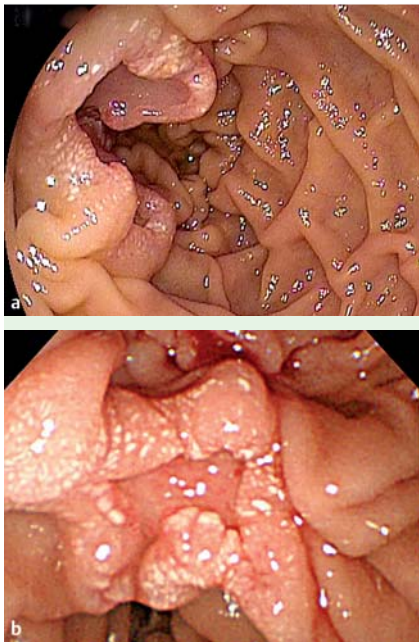


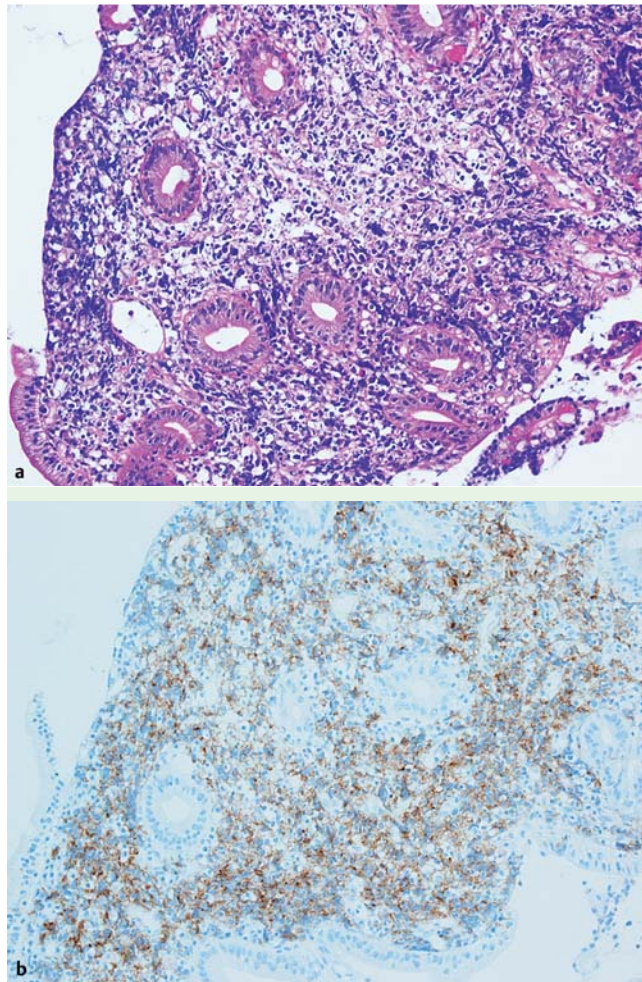
## Human immunodeficiency virus (HIV)-associated duodenal lymphoma



**Fig. 1** Endoscopic images of the duodenum showing two ulcerative lesions: **a** second part of the duodenum; **b** inferior duodenal angulus.

A 68-year-old man was referred to our hospital for HIV treatment. He noticed melena on admission. Laboratory data showed anemia, with a hemoglobin level of 8.2 g/dL. The CD4 lymphocyte count was 101 cells/ $\mu$ L.

Esophagogastroduodenoscopy (EGD) showed two ulcerative lesions in the second part of the duodenum and in the inferior duodenal angulus (● **Fig. 1**). These well-demarcated lesions consisted of an ulcer with a clean base and a regular elevated margin that had an auricle-like shape and many scattered tiny white spots. Histological examination of the biopsy specimens confirmed the diagnosis of diffuse large B-cell lymphoma (DLBCL). Immunochemical staining was positive for L-26 (CD20) (● **Fig. 2**). Antiretroviral therapy (ART) was started for HIV treatment. After ART, the patient received six cycles of R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisolone) chemotherapy. Follow-up EGD showed tumor regression. Non-Hodgkin's lymphoma is a common malignancy in HIV-positive individuals,



**Fig. 2** Photomicrographs of the biopsy specimen from the duodenal lesion (hematoxylin and eosin stain,  $\times 20$ ): **a** multiple atypical large lymphoid cells infiltrating the duodenal mucosa; **b** large lymphoid cells that are positive for L-26 (CD20).

and the gastrointestinal tract is one of the most common extranodal sites. However, HIV-associated duodenal lymphomas are very rare [1–3]. The endoscopic findings in AIDS-associated lymphoma are reported to be similar to those for gastrointestinal lymphomas in immunocompetent patients: polypoid, bulky lesions or well-defined ulcers are found in combination or as single lesions [4]. The most common HIV-associated lymphomas are Burkitt's lymphoma and DLBCL. Although the incidence of follicular lymphoma in the duodenum is relatively higher than in other portions of the gastrointestinal tract [5], follicular lymphoma has not been reported in HIV-infected patients. Our patient was diagnosed with DLBCL and showed an excellent response

to the R-CHOP chemotherapy administered after ART.

If unique duodenal ulcerative lesions are found, HIV-associated duodenal lymphoma should be considered as a rare differential diagnosis. Furthermore, accurately diagnosing DLBCLs by endoscopic biopsy is very important in such cases because HIV-associated lymphomas of the gastrointestinal tract have a poor prognosis [4] and require aggressive treatment.

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**Competing interests:** None

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