Post-transplant lymphoproliferative disorder of the ileum diagnosed by double-balloon enteroscopy

Fig. 1 Endoscopic images showing: **a** an ulcer seen during esophagogastroduodenoscopy on the posterior wall of the stomach (later histological diagnosis was nonspecific); **b** multiple ulcers detected in the ileum by double-balloon enteroscopy (DBE).

Fig. 2 Pathological appearance of the resected ileum showing: **a** diffuse large B-cell lymphoma caused by post-transplant lymphoproliferative disorder (PTLD); **b** positivity (brown staining) for EBV-encoded RNA (EBER).

Post-transplant lymphoproliferative disorder (PTLD) is a common life-threatening complication after solid-organ transplantation that is mostly related to Epstein-Barr virus (EBV) infection [1]. PTLD occurs in 6.2% of lung transplants, 5.2% of kidney and pancreas transplants, 2% of heart transplants, and 1.4% of liver transplants [2]. Although around 15% of patients present as an emergency with intestinal perforation [3], there are only a few reports of cases in which PTLD lesions in the small intestine have been observed endoscopically. We report a case of PTLD involving the ileum that occurred 11 months after heart transplantation and was detected during double-balloon enteroscopy (DBE). A 49-year-old man who had undergone a heart transplant 11 months previously and was receiving 10 mg tacrolimus,

2.5 mg everolimus, and 5 mg prednisolone per day was admitted to our hospital because of high fever and passage of a tarry stool. Esophagogastroduodenoscopy (EGD) showed an ulcer in the posterior wall of the stomach (● Fig. 1a), which was later shown on pathological examination to contain a nonspecific inflammatory infiltrate. Further examination with DBE revealed multiple ulcers in the ileum (● Fig. 1b), which were later shown to be positive on fluorodeoxyglucose-positron emission tomography (FDG-PET).

Treatment was started with fasting and total parenteral nutrition, but his condition remained unchanged. After a month, he complained of sudden severe abdominal pain, which was caused by perforation of the ileal ulcers, and he underwent

emergent segmental ileal resection. Pathological examination of the resection specimen revealed a diagnosis of diffuse large B-cell lymphoma caused by PTLD (● Fig. 2a) and staining for EBV-encoded RNA (EBER) was positive (● Fig. 2b). He therefore received treatment with rituximab, and a subsequent FDG-PET scan showed that the FDG-avid stomach lesion had disappeared.

There have been few reported cases of PTLD-related ileal lesions being diagnosed by endoscopy. Nevertheless, the possibility of PTLD must be considered when multiple ileal ulcers are observed after organ transplantation.

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