A 59-year-old man was admitted because of nausea and fatigue. He had been diagnosed with gastric adenocarcinoma 7 months earlier, and because of gastric outlet obstruction had undergone total gastrectomy with esophagojejunostomy and omentectomy (pT3N3bM0R1). Post-operatively, platinum-based chemotherapy was initiated, followed by radio-chemotherapy (5-fluorouracil + 45 Gy) approximately 2 weeks before admission. Initially, the nausea and fatigue were attributed to ongoing radiochemotherapy. During admission the patient became bed-bound, with pronounced anasarca edema secondary to severe hypoalbuminemia (lowest level 9.9 g/L, normal 35–52 g/L) despite maximal supportive care, suggestive of protein-losing enteropathy (proteinuria was only mild). From the esophagojejunostomy onwards, the mucosa was severely inflamed with ulcerations, desquamation, and spontaneous submucosal hemorrhages for approximately 15 cm in the jejunum (Fig. 1a, b). Microscopic examination revealed extensive ulceration with granulation and dense infiltration of mononuclear cells, cytomegaly, and Cowdry inclusions (Fig. 1c). The diagnosis of cytomegalovirus (CMV) jejunitis was strengthened by positive serum CMV polymerase chain reaction (PCR; 3.84 log copies/mL). After 2 weeks of treatment with ganciclovir, the patient’s general condition recovered and CMV PCR became negative. At 1 month after discharge, the patient was in good general condition with an albumin level of 31.2 g/L (Fig. 1d).

Although CMV infection is mostly asymptomatic or gives rise to only mild mononucleosis-like symptoms, in immunocompromised or critically ill patients it can cause life-threatening complications [1–3]. CMV enteritis occurs in only 4% of patients with CMV disease and is mostly restricted to a defined area rather than being panenteric [4]. As shown in inflammatory bowel diseases where CMV infects areas of already inflamed mucosa [5], it is likely that mucosal changes secondary to radiotherapy provide favorable conditions for CMV infection. The protein-losing enteropathy was most likely a combination of inflammatory exudation and villous atrophy with increased permeability associated with CMV infection [6]. This case illustrates that CMV should be included in the differential diagnosis of protein-losing enteropathy, especially following radiation therapy, and that biopsies should be taken to investigate CMV even when other potential explanations of mucositis are present.
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