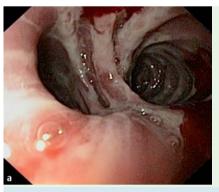
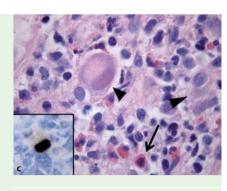
# Postgastrectomy protein-losing cytomegalovirus jejunitis in an immunocompromised patient









**Fig. 1** Cytomegalovirus jejunitis in an immunocompromised patient. **a, b** Upper gastrointestinal endoscopy revealed inflamed mucosa from the esophagojejunostomy, followed by ulcerative jejunitis with spontaneous submucosal hemorrhages. **c** Hematoxylin and eosin staining showed cytomegaly (arrow heads) and Cowdry inclusion body (arrow), with specific cytomegalovirus staining positive (insert). **d** Serum albumin levels over time. Green bar indicates treatment period with ganciclovir.

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 ( $pT_3N_{3h}M_0R_1$ ). Postoperatively, platinum-based chemotherapy was initiated, followed by radiochemotherapy (5-fluorouracil+45 Gy) approximately 2 weeks before admission. Initially, the nausea and fatigue were attributed to ongoing radiochemotherapy. During admission the patient became bedbound, 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. 1 a, 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. 1 d).

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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#### References

- 1 Whitley RJ, Jacobson MA, Friedberg DN et al. Guidelines for the treatment of cytomegalovirus diseases in patients with AIDS in the era of potent antiretroviral therapy: recommendations of an international panel. International AIDS Society – USA. Arch Intern Med 1998; 158: 957–969
- 2 Chamberlain RS, Atkins S, Saini N et al. Ileal perforation caused by cytomegalovirus infection in a critically ill adult. J Clin Gastroenterol 2000; 30: 432–435
- 3 Jain M, Duggal S, Chugh TD. Cytomegalovirus infection in non-immunosuppressed critically ill patients. J Infect Dev Ctries 2011; 5: 571–579
- 4 Baroco AL, Oldfield EC. Gastrointestinal cytomegalovirus disease in the immunocompromised patient. Curr Gastroenterol Rep 2008; 10: 409 416
- 5 Kaufman HS, Kahn AC, Iacobuzio-Donahue C et al. Cytomegaloviral enterocolitis: clinical associations and outcome. Dis Colon Rectum 1999; 42: 24–30
- 6 Nakase H, Itani T, Mimura J et al. Transient protein-losing enteropathy associated with cytomegalovirus infection in a noncompromised host: a case report. Am J Gastroenterol 1998; 93: 1005 1006

### **Bibliography**

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