

Pan-Digestive Tract Colonization by Cytomegalovirus in Common Variable Immunodeficiency

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Dear Editors

We read with interest the paper by Kralickova et al. [1] on cytomegalovirus (CMV) infections in common variable immunodeficiency (CVID). We fully agree with the authors' conclusions that infections due to CMV are more frequent than previously reported. In CVID patients, viral infections, such as those due to norovirus and CMV, have been reported to be of pathogenic importance in gastrointestinal (GI) damage in up to 5% of patients [2–4]. In the paper by Kralickova et al. [1], the frequency of systemic CMV reached 10%, one third with localization in the GI tract. Information on the frequency of infectious complications of the GI tract in CVID comes mainly from one French study on 252 patients where *Giardia lamblia* was the predominant infectious agent, at least in patients with undetectable serum IgA levels [5]. This finding was emphasized in a recent review on diagnosis and treatment of GI disorders in patients with primary immunodeficiency [6].

In order to emphasize the role of CMV infections of the GI tract, we report on a 44-year-old white male with a diagnosis of CVID made 10 years earlier. Since his diagnosis, the patient has had regular immunoglobulin infusions and has been treated for several mainly respiratory tract infections. Prior to the definite diagnosis of CVID, he was typically given a number of diagnoses including celiac disease, autoimmune hemolytic anemia, autoimmune platelet deficiency as well as others. He was admitted to the infectious disease unit of our hospital in April 2011 because of severe diarrhea, fever, and weight loss. Upper and lower endoscopies revealed ulcerative lesions in the stomach and colon without involvement of the rectum. Histology was consistent with gastric and colonic CMV infection (fig. 1). Systemic CMV infection was confirmed by positivity of CMV-DNA in peripheral blood. The patient was treated with ganciclovir for 20 days and his symptoms subsided. Three months later, he was admitted

to our unit because of low-grade fever and severe asthenia. Repeated endoscopies showed again ulcerative lesions in the upper and lower GI tract. One week later, despite appropriate viral and antibiotic treatment (for concomitant bronchiolitis), he was operated on for a pericecal abscess due to cecal perforation and an anastomosis between the ileum and the right colon after ileocecal resection had been performed. Thereafter, antiviral treatment, i.v. followed by oral valganciclovir, was continued until the complete absence of circulating CMV-DNA. The patient refused control endoscopy.

With respect to CMV infection in CVID, only few cases have been reported in the literature, the first in 1977 [7], but the possibility of a publication bias should be considered, since CMV infection in immunosuppressed patients is not surprising and the literature on transplanted or hematological patients is overwhelming concerning this topic. In patients with di-

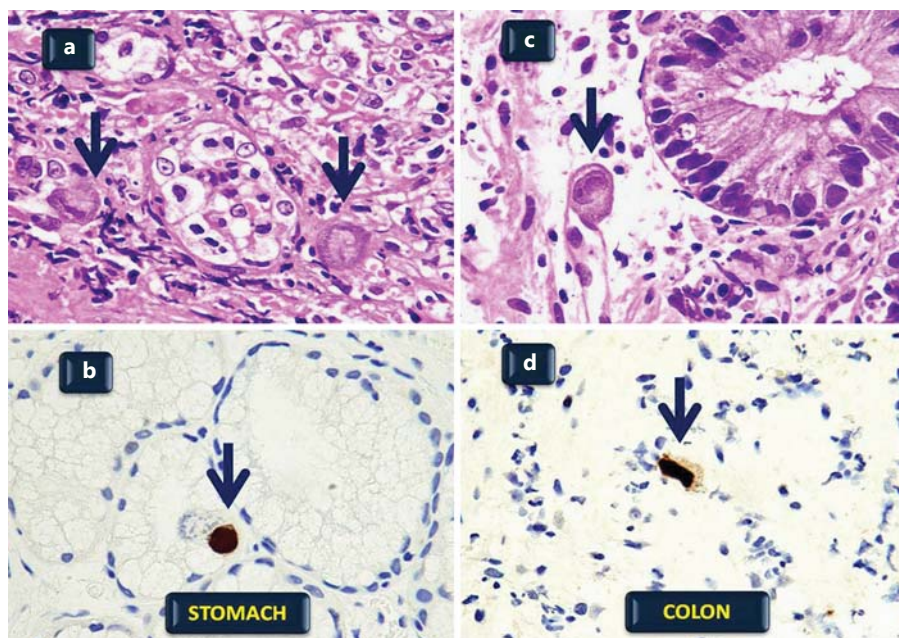


Fig. 1. **a** CMV gastritis; different cells with the typical nuclear inclusions (arrows). HE. $\times 40$. **b** Immunohistochemistry for CMV (arrow). $\times 100$. **c** CMV colitis with a typical owl eye cell (arrow). HE. $\times 100$. **d** Immunohistochemistry for CMV (arrow). $\times 100$.

agnosed CVID, viral infections should be searched for, since their specific treatment may resolve diarrhea and GI damage [3]. Interestingly, different from inflammatory bowel disease-associated CMV infection, where damage seems to remain confined to the colonic mucosa, CMV or norovirus infection in CVID show wide-

spread colonization of the digestive tract [3, 8], leading to malabsorption and other complications such as perforation as in our patient.

In conclusion, besides investigations for parasites and bacterial infections, viral infections should be ruled out in patients with CVID.

Disclosure Statement

The authors have no conflicts of interest to declare.

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