CMV gastritis in the immunocompetent host

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To the editor,

The human cytomegalovirus (CMV) is a well known intestinal pathogen in the immunocompromised host. Immunocompetent patients however are rarely affected (1).

We report a case of CMV gastritis in a 78 year old immunocompetent male with a blank medical history. He presented with symptoms of anorexia, nausea, mild epigastric discomfort and a weight loss of three kilograms. The clinical examination was unremarkable. Blood analysis showed a reactive lymphocytosis with mild elevation of liver enzymes (AST 41 U/L [< 37 U/L], ALT 57 U/L [< 41 U/L], LDH 673 U/L [< 530 U/L]) and C-reactive protein (6 mg/L [< 5 mg/L]). Abdominal ultrasound was normal. Gastroscopic examination revealed a diffuse gastritis with erosions and multiple, elevated ulcerations with a centrally localised crater. On pathological examination an active and focal erosive gastritis was documented. Numerous cells exhibited nuclear inclusions suggesting CMV gastritis (Fig. 1). Helicobacter pylori testing was positive. IgM anti-CMV and IgG anti-CMV serum antibodies were positive, with low IgG avidity suggesting a recent infection. HIV serology was negative. The patient was treated with proton pump inhibitors and made a full recovery.

Within the gastro-intestinal tract CMV most commonly affects the colon and the stomach, especially the antropyloric region. Symptoms of CMV gastritis are nonspecific and may include nausea, epigastric pain, fever and bleeding. Apart from inflammatory changes (hyperaemia, erythema and a fragile mucosa), single or multiple ulcers and erosions are the most frequently encountered endoscopic abnormalities. Ulcers are generally deep and round. Less frequently localised thickenings of the mucosa, inflammatory pseudopolyps or rugal hypertrophy are found (2). Another well recognized endoscopic entity, especially in infants, is a diffuse oedematous mucosa with thickened gastric folds, and protein-losing enteropathy, mimicking Ménétrier's disease (3). In a recent case series the endoscopic and histological findings in 30 patients (both immunodeficient and immunocompetent) with proven CMV infection of the upper gastro-intestinal tract were described. The lesions were generally restricted to a single organ and the antropyloric portion of the stomach was most frequently affected followed by the cardia, the lower oesophagus and the duodenum (4).

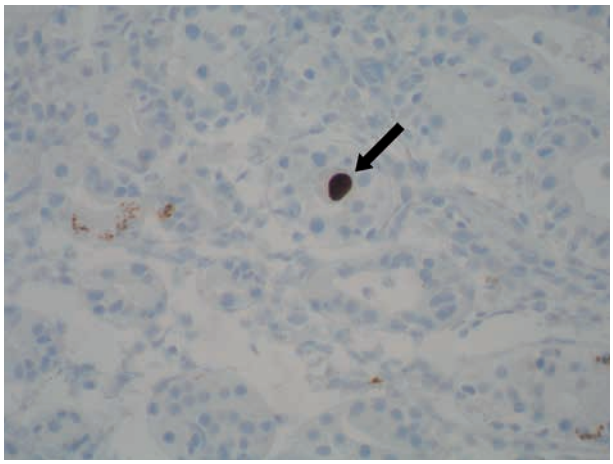

Fig. 1. — Immunostaining of the biopsy specimen with monoclonal CMV-antibody (400×) confirming the presence of CMV gastritis (black arrow).

As the endoscopic findings are non-specific, the diagnosis ultimately depends on the characteristic histopathological features. Microscopic examination usually reveals foveolar hyperplasia with a lymphoplasmacytic infiltrate and characteristic eosinophilic inclusions ('owl-eye' inclusions). Stromal and epithelial cells are predominantly infected. The inclusion bodies however may be rare and difficult to detect on routine hematoxylin-eosin-stains. Immunohistochemistry for CMV antigens and in situ DNA hybridization or quantitative PCR for CMV DNA are therefore important additional techniques to increase the sensitivity (5). Whether co-infection with H. pylori is co-incidental or not is unknown.

Given the fact that intestinal CMV infection is much more frequent in the immunocompromised patient, clinicians should be aware of an underlying disease compromising the immune system. In a study 4 out of 11 apparently immuncompetent patients with intestinal CMV infection were found to harbour a malignant tumour at follow up (6). Multiple affected sites, larger ulcers and

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oesophageal involvement have been linked, however not consistently, with underlying immunodeficiency (4).

To our knowledge no practice guidelines regarding the use of antivirals in immunocompetent individuals with intestinal CMV infection have been published. In most patients the CMV infection is self-limiting and the gastritis responds well to symptomatic treatment. However in patients with concurrent severe CMV infection of the brain, the eyes or the lung antiviral treatment seems mandatory.

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