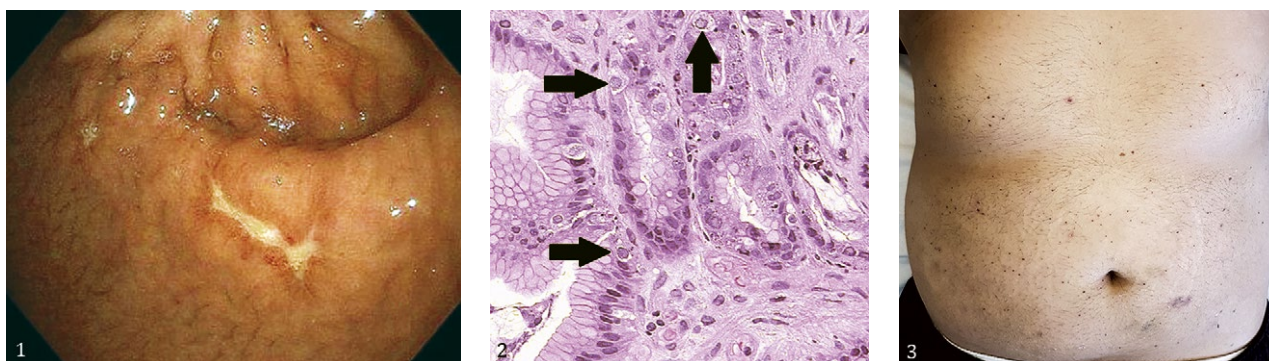


Visceral Varicella-Zoster Virus Infection in An Immunocompromised Patient: Uncommon Endoscopic Differential Diagnosis

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A 38-year-old Caucasian male with a history of diffuse large B-cell-lymphoma diagnosed in March 2012 received chemotherapy (8 cycles Rituximab/Bendamustine in 2012, 6 cycles R-CHOP in 2016). He presented in our department with severe epigastric pain 10 weeks after a bone marrow transplantation due to relapse. There were no signs of melena or hematemesis. After an unremarkable abdominal X-ray, early endoscopy revealed gastritis and multiple *Helicobacter pylori* negative ulcers localized in the stomach [Forrest II and III (Fig. 1)] and duodenum (Forrest III). Histological assessment from the mucosal gastric ulceration revealed viral inclusion bodies (Fig. 2, H&E, arrows) depicted at molecular evaluation to be varicella-zoster virus (VZV) DNA-transcripts.

Within the following 48 hours, the patient developed multiple blisters covering his entire trunk, without dermatomal distribution patterns (Fig. 3). Furthermore, VZV DNA-transcripts were found in the blood samples and skin tissue. The patient received acyclovir, immunoglobulins due to low IgG-levels after bone marrow transplantation, as well as symptomatic treatment; he fully recovered.

Due to high VZV-IgG titer and history of chickenpox during childhood, this case presents a visceral VZV dissemination due to a reactivation of VZV in an immunocompromised patient.

Varicella-zoster virus remains latent within the sensory nerve ganglia after primary infection, and reactivation of VZV typically results in an unilateral dermatomal rash, known as herpes zoster. However, there is evidence that VZV may remain latent in ganglia of enteric neurons [1-2]. In immunocompromised patients, herpes zoster is common, especially in patients who have undergone bone marrow transplantation [3], but only a few cases of gastrointestinal zoster have been reported [4-5].

This case illustrates that gastrointestinal zoster may lead to acute abdominal pain due to severe mucosal ulcerations even in the absence of dermatological manifestations. Early endoscopy may therefore be crucial to immediately guide differential diagnosis, especially in immunocompromised patients. Characteristic histomorphology findings of inclusion bodies from mucosal ulcerations should lead to PCR-based diagnosis and early antiviral treatment.

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