Haematemesis in an elderly patient

CLINICAL PRESENTATION

A patient in his early 70s presented to our emergency department with haematemesis, fatigue, fever and pallor. Clinical examination revealed low blood pressure (80/50 mm Hg), tachycardia (120/min), pallor, decreased consciousness and fever. The patient's oxygen saturation was 86% and with 4 L/min of oxygen 95%. Laboratory investigations indicated anaemia (haemoglobin 81 g/L) and elevated inflammatory markers (leucocytes 13.74/nL, C reactive protein 188 mg/L, procalcitonin 19.3 ng/mL). Medical history for dyspepsia, peptic ulcer disease or use of non-steroidal anti-inflammatory drugs was negative. The patient was transferred to the intensive care unit, where he received vasopressors to maintain normal blood pressure. No blood transfusion was required. To prevent aspiration pneumonia and to safely perform endoscopy, the patient was endotracheally intubated. Oesophagogastroduodenoscopy showed ulcerative duodenitis starting from the duodenal bulb and extending to the descending part of the duodenum (figure 1A–D, arrows). A bleeding ulcer was endoscopically treated using a through-the-scope clip (figure 1E,F, arrows). To perform Campylobacter-like organism (CLO) test, histopathological and microbiological examinations, biopsies were taken from the descending part of the duodenum, the gastric antrum and the corpus. Since the CLO test was negative, the patient did not receive treatment for *Helicobacter pylori*.

QUESTION

What is your suspected cause of the ulcerative duodenitis?

ANSWER

The patient could be extubated postintervention. Virological examinations of duodenal biopsies using PCR detected infection with SARS-CoV-2. Histopathological observations revealed acute inflammation with infiltrating granulocytes, partly in the epithelium (figure 2A), and immunohistochemistry for SARS-CoV-2 showed individual cells with a positive immunoreaction (figure 2B), corroborating the diagnosis of COVID-19 duodenitis. The virus was also detected in stool and respiratory samples. After treatment with nirmatrelvir/ritonavir and dexamethasone, the patient's condition improved, and he could be discharged.

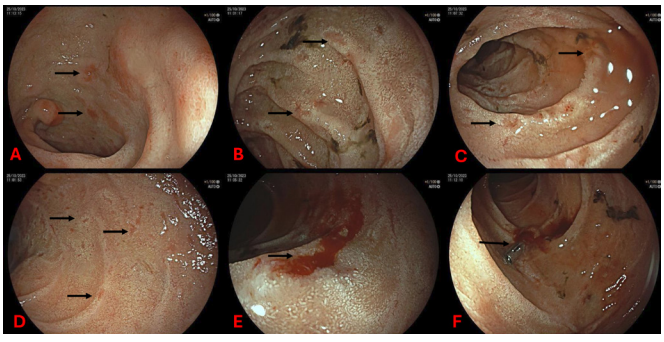

Figure 1 Endoscopic view of the duodenal bulb (A) and of the descending part of the duodenum (B–F).

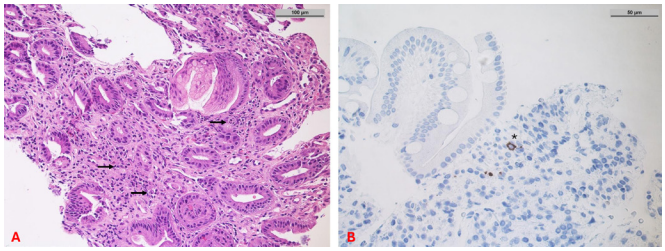

Figure 2 Histology from the duodenal biopsy (A) showing mild acute inflammation (H&E, ×200 magnification) with infiltrating granulocytes, partly in the epithelium (→). Immunohistochemistry (B) for SARS-CoV-2 showing individual cells (*) with positive immunoreaction (clone BSB-134, BioSB, Santa Barbara (USA), dilution 1:200, ×400 magnification).

Gastrointestinal (GI) symptoms in COVID-19 are mostly reported as diarrhoea, nausea, vomiting and abdominal discomfort.[1–3] GI bleeding is rather rare.[2] A study from Germany found that about 8% of critically ill COVID-19 patients develop duodenitis that can cause bleeding.[4] However, very few authors have detected direct proof of intracellular SARS-CoV-2 in GI tissue using molecular assays.[4 5]

The present case confirms the causality between SARS-CoV-2 infection of the duodenal epithelial cells and GI bleeding. This case emphasises the importance of considering COVID-19 in the differential diagnosis of GI symptoms and bleeding, particularly in critically ill patients, and underlines the need for further research into the GI manifestations of SARS-CoV-2 infection.

Patricia Mester,[1] Laura Drösch,[1] Stephan Schmid ,[1] Florian Weber,[2] Arne Kandulski ,[1] Martina Müller,[1] Vlad Pavel [1]

[1]Department of Internal Medicine I, Gastroenterology, Hepatology, Endocrinology, Rheumatology, and Infectious diseases, University Hospital Regensburg, Regensburg, Germany
[2]Institute of Pathology, University of Regensburg, Regensburg, Germany

Correspondence to Dr Vlad Pavel, Department of Internal Medicine I, Gastroenterology, Hepatology, Endocrinology, Rheumatology, and Infectious diseases, University Hospital Regensburg, Regensburg, Germany; vlad.pavel@ukr.de

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ORCID iDs
Stephan Schmid http://orcid.org/0000-0003-2222-2926
Arne Kandulski http://orcid.org/0009-0005-9065-8395
Vlad Pavel http://orcid.org/0000-0002-9473-3509

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