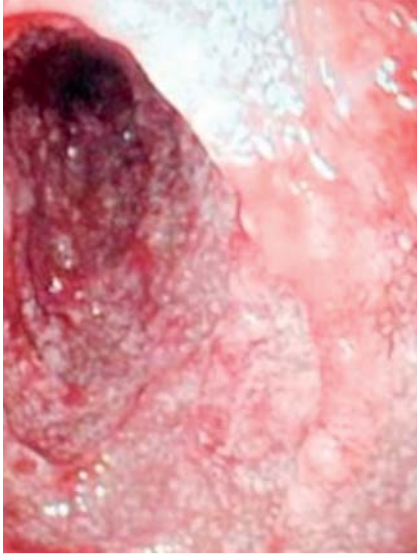
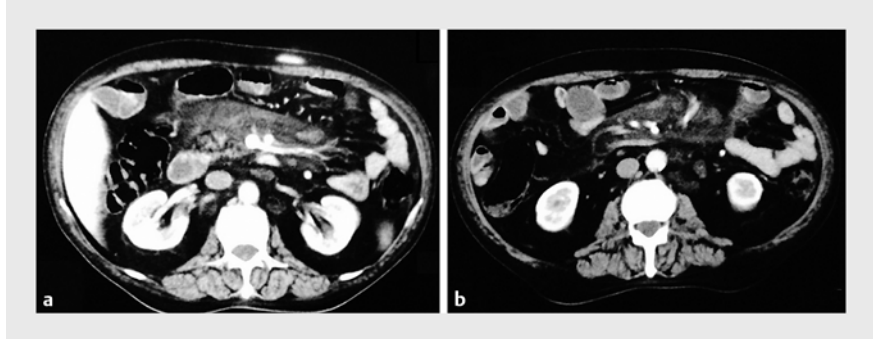


## Capsule endoscopy aiding diagnosis of a rare condition – Whipple's disease

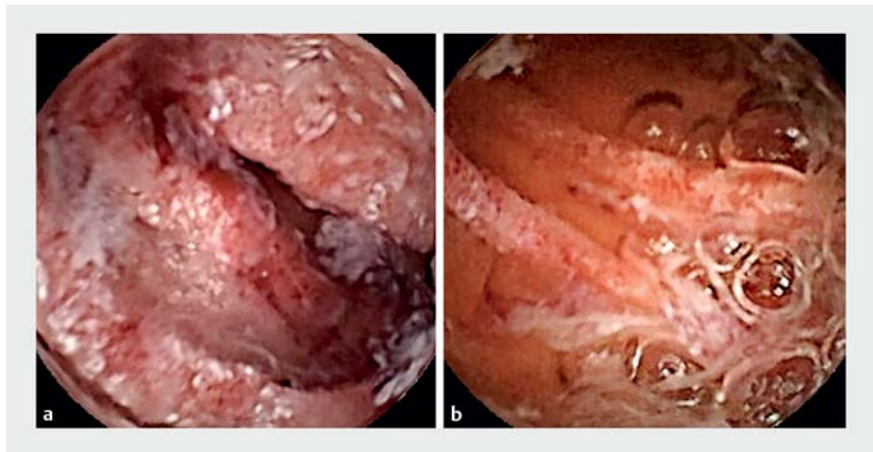


► **Fig. 1** Upper endoscopy revealed edema and multiple erosions of the bulb and the second portion of the duodenum in a 62-year-old man who presented with chronic diarrhea and weight loss.

A 62-year-old man presented with diarrhea (5 motions/day) that had lasted for 3 months. He had no abdominal pain and no fever, but stated a weight loss without anorexia of 7 kg over 4 months. Physical examination showed normal findings except for cutaneous-mucosal pallor. Laboratory tests revealed anemia, hypoalbuminemia, and decreased prothrombin time. Colonoscopy showed normal appearances. Upper gastrointestinal (GI) endoscopy revealed edema and multiple erosions of the bulb and the second portion of the duodenum (► **Fig. 1**). Histological investigation revealed hyperplasia of Brunner glands. At 1 week after hospital admission, he experienced pain of the abdomen and joints (hands and wrists) and hematochezia, with hemodynamic repercussions. Abdominal computed tomography (CT) revealed para-aortic lymph nodes (► **Fig. 2**). Upper GI endoscopy and colonoscopy findings were identical to those seen previously. Capsule endoscopy revealed diffuse and continuous involve-



► **Fig. 2 a, b** Abdominal computed tomography revealed para-aortic lymph nodes.

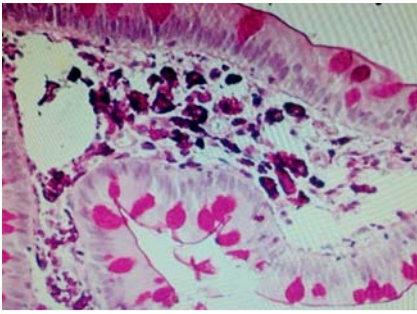


► **Fig. 3 a, b** Capsule endoscopy showed diffuse and continuous involvement of the jejunal and ileal mucosa with edema, erosions, and multiple whitish spots.

ment of the jejunal and ileal mucosa with edema, erosions, and multiple whitish spots (► **Fig. 3**). Duodenal histological investigation showed macrophages in the lamina propria that were positive for periodic acid–Schiff (PAS), which was suggestive of Whipple's disease (► **Fig. 4**). Whipple's disease is a rare bacterial infection that may involve any organ system in the body. It occurs primarily in men older than 40 years. The GI tract is the system most frequently involved. Clinical features of Whipple's disease include abdominal pain, diarrhea, weight loss, low grade fever, lymphadenopathy, seronegative arthritis, and neurological manifestations [1,2]. Because of the

wide variability of manifestations, the clinical diagnosis is very difficult and it is often made only years or even decades after the initial symptoms have appeared. The etiological agent is *Tropheryma whippelii* which is usually seen as positive PAS staining in infected tissues [1, 3]. Treatment is based on the combination of penicillin G (1.2 million units/day intramuscularly) plus streptomycin (1g/day intramuscularly) or a third-generation cephalosporin for 2 weeks followed by the administration of trimethoprim–sulfamethoxazole (160 mg/800 mg, twice per day) for at least 1 year [2].

Endoscopy\_UCTN\_Code\_CCL\_1AC\_2AH



► **Fig. 4** Duodenal histological examination showed macrophages in the lamina propria that were positive for periodic acid–Schiff (PAS).



► **Video 1** Capsule endoscopy revealing a diffuse and continuous involvement of the jejunal and ileal mucosa with edema, erosions, and multiple whitish spots, in a patient diagnosed with Whipple's disease.

### Competing interest

None

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### Bibliography

DOI <https://doi.org/10.1055/a-0896-2269>  
Published online: 13.5.2019  
*Endoscopy* 2019; 51: E272–E273  
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Stuttgart · New York  
ISSN 0013-726X

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