Chronic diarrhea because of villous atrophy unrelated to celiac disease

A 71-year-old woman was admitted with a 7-month history of watery diarrhea, which had led to an unintentional 30 kg (27 %) of weight loss and admittance to the intensive care unit (ICU) on two separate occasions as a result of dehydration. Endoscopy and video capsule evaluation revealed villous atrophy of the entire small bowel, with fissuring, nodularity, and loss of folds, as shown for both duodenum (**Fig. 1 a**) and ileum (**Fig. 1 b**). The mucosa appeared fragile, with ulcers after biopsies (**Fig. 1 c**). Histology confirmed complete villous atrophy and showed lengthened regenerative crypts, only a few intraepithelial lymphocytes, and thickening of the basal membrane in both proximal (**Fig. 2**) and distal small-bowel biopsies. Colonoscopy revealed a pale and edematous mucosa with superficial ulcerations, more pronounced distally (**Fig. 3**). Microscopic evaluation showed subtle inflammation in colon biopsies with focal erosion, a focally thickened basal membrane, and some apoptotic cells in the epithelium (**Fig. 4 a, b**). Infectious, ischemic, and malignant disorders were excluded. Serum anti-tTG IgA and anti-gliadin IgG were negative during and after gluten exposure, ruling out celiac disease. The clinical presentation and diagnostic findings were most compatible with adult-onset autoimmune enteropathy [1], affecting an extensive part of the digestive tract (stomach to rectum). Immunosuppressive therapy was started; however high dose prednisolone, increasing doses of azathioprine, and immunoglobulins failed to induce any clinical response. The patient continued to produce voluminous diarrhea; however 3 weeks after starting therapy with oral budesonide (3 × 3 mg daily, pulverized in the morning, granules at noon, capsule at night) [1], the patient recovered, with formed stools, clinical improvement, and weight gain. Duodenal biopsies revealed completely restored villous architecture (**Fig. 5**). The patient has remained well for 20 months of follow-up.

Thus, autoimmune enteropathy should be considered after exclusion of celiac disease when severe diarrhea is associated with villous atrophy. Topical immunosuppressive treatment should be applied.

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Competing interests: None

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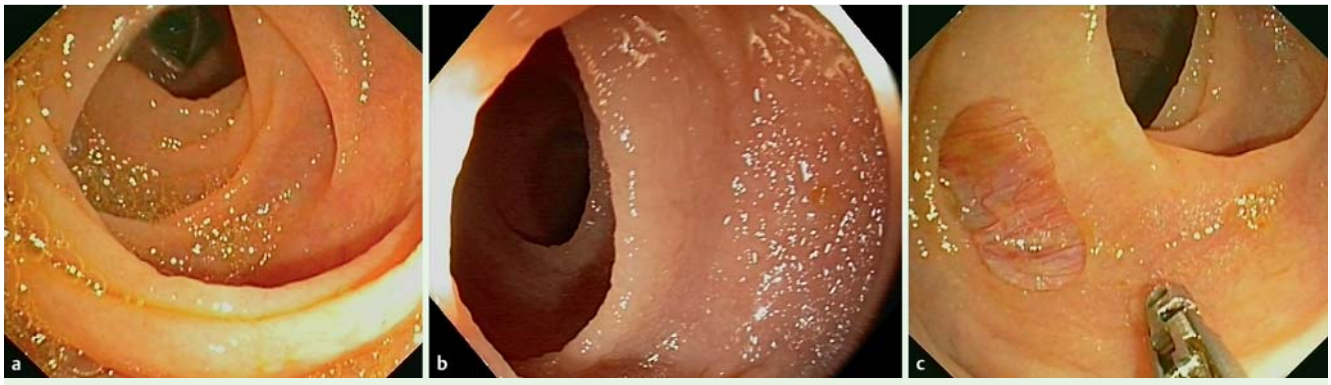

Fig. 1 A 71-year-old woman was admitted with a 7-month history of watery diarrhea and weight loss. Endoscopic images showing: **a** villous atrophy in the duodenum; **b** villous atrophy in the ileum; **c** ulcers after biopsies in the duodenum.

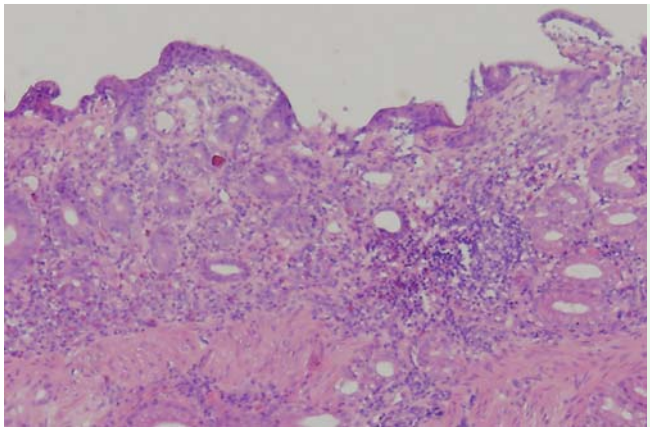

Fig. 2 Proximal small-bowel biopsy (hematoxylin and eosin (H&E) stain) of duodenal mucosa demonstrating severe villous atrophy, some inflammation, and thickening of the basal membrane.

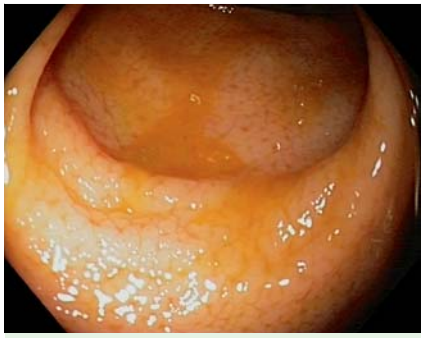

Fig. 3 Colonoscopy of the distal colon showing pale and edematous mucosa with superficial ulcerations.

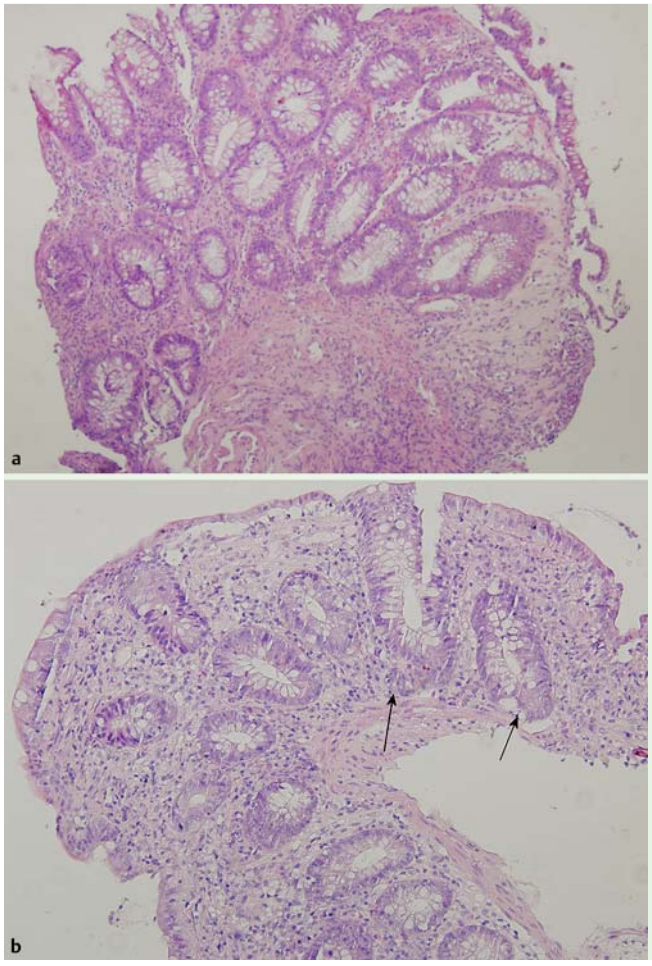

Fig. 4 Colonic mucosa (H&E staining) showing: **a** focal erosion with homogenization of the lamina propria; **b** some apoptotic cells (arrows) in the epithelium.

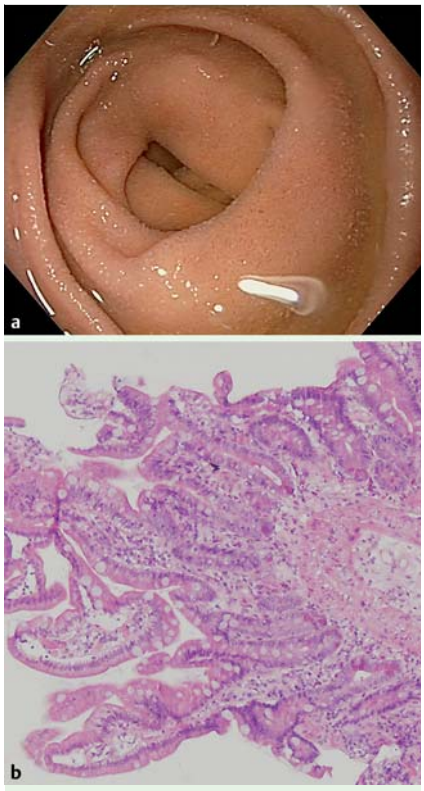

Fig. 5 Restored villous architecture after topical budesonide treatment: **a** endoscopic view; **b** microscopic view.

Reference

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Bibliography

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