Microscopic (collagenous) colitis in a patient with a heart transplant

A 62-year old female patient presented with symptoms of watery diarrhea, abdominal discomfort, and weight loss persisting for several weeks. The patient had undergone a heart transplant procedure 10 years earlier because of ischemic cardiomyopathy. Immunosuppression consisted of cyclosporin A and mycophenolate mofetil (CellCept; Genentech, South San Francisco, California, USA). Steroids had been stopped 3 months before.

The clinical examination findings were normal. Laboratory work-up showed kidney failure (serum creatinine, 2.54 mg/dL) and mild hyponatremia. The C-reactive protein level and leukocyte count were normal, whereas the procalcitonin level (0.09 ng/mL; normal < 0.05), ferritin level (137 µg/L; normal 20–120), and blood sedimentation rate (42 mm/h) were slightly elevated. Results of testing for immunoglobulin A (IgA) anti-tissue transglutaminase antibodies and IgA anti-gliadin antibodies were negative. Results of stool analysis, sonography, computed tomography, and esophagastroduodenoscopy with Helicobacter pylori testing were normal.

A biopsy specimen from the descending duodenum showed no signs of inflammation, celiac disease, Whipple disease, or lamblia. A colonoscopy revealed mucosal edema and a diminished vascular pattern [1] (Fig. 1). Biopsy specimens obtained from the sigmoid colon showed features of collagenous colitis (Fig. 2), which led to the diagnosis of microscopic (collagenous) colitis. The patient was treated with budesonide [2], and her symptoms rapidly decreased. After 4 weeks, the microscopic findings were normal.

Diarrhea is common in patients with solid organ transplants and is usually attributed to infection or side effects of medication. The suspicion of microscopic colitis in a patient with a transplant is counterintuitive because immunosuppressants are effective in the treatment of microscopic colitis. Only a few cases have been reported, none of them in patients with heart transplants [3]. We cannot completely rule out gastrointestinal infection, as has been reported for lymphocytic colitis [4]. However, infection-associated collagenous colitis is unlikely. Of the possibly causative drugs, the patient’s medications included a proton pump inhibitor and a statin, but no nonsteroidal anti-inflammatory drug [5]. The patient’s medication was not changed during follow-up.

To the best of our knowledge, this is the first report of microscopic colitis occurring in a patient with a heart transplant. Microscopic colitis should be considered when diarrhea of unknown etiology occurs in a patient with a solid organ transplant.

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Competing interests: None

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**Fig. 1** During total colonoscopy performed on admission in a 62-year old female patient with symptoms of watery diarrhea, abdominal discomfort, and weight loss persisting for several weeks, focal mucosal edema and a diminished vascular pattern (a) are seen beside normal mucosa without macroscopic pathologic findings (b, c). The patient received a heart transplant 10 years earlier.

**Fig. 2** a Colonic biopsy specimen showing colonic mucosa with regular crypt architecture, an increased lamina propria, lymphoplasmacytic inflammation, and intraepithelial lymphocytes (hematoxylin and eosin stain, 200-fold magnification). There are (b) marked subepithelial collagenous deposition (acid fuchsin orange G stain, 200-fold magnification) and (c) an increased number of CD45-positive intraepithelial lymphocytes (18 intraepithelial lymphocytes per 100 enterocytes is average), consistent with a diagnosis of collagenous colitis (CD45 immunohistochemistry, 200-fold magnification).
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