Severe non-specific immune reconstitution inflammatory syndrome (IRIS) presenting with graft-versus-host disease-like colitis

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Fig. 1 Colonoscopy revealed diffuse erythema of the mucosa, bleeding by contact, and multiple aphthae. Histology showed graft-versus-host disease-like lesions in biopsies of colon and small bowel.

a Severe crypt atrophy and crypt loss of colonic mucosa (*arrow* crypt abscesses), **b** small bowel with widespread epithelial cell apoptosis (*arrow*). **c, d** Mildly increased lymphocytic infiltrate in the lamina propria consisting of CD4-positive (**c**) and CD8-positive (**d**) T cells. In view of the fact that human immunodeficiency virus infection leads to a massive depletion of CD4 T cells from the gut [3], the infiltration of the lamina propria with CD4 T cells in this late-presenter is remarkable. Staining:

a, b Hematoxylin–eosin, **c, d** immunohistochemistry. CD4 antibody was from Leica Biosystems, Wetzlar, Germany (1:10); CD8 antibody was from Thermo Fisher Scientific Inc. Rockford, IL (1:25)

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A 42-year-old, male, human immunodeficiency virus (HIV)-infected late-presenter was admitted to our hospital with *Pneumocystis jiroveci* pneumonia (Pjp). At presentation, his CD4 count was 12/µl (6 %), and the viral load was 471,000 copies/ml. In addition to Pjp treatment, highly active antiretroviral treatment (HAART) was started with tenofovir/emtricitabine and nevirapine. After recovery, he presented to the outpatient department 2 months later.

At this point, his CD4 count was 56/ μ l (11 %), and his viral load was 540,000 copies/ml despite continuous intake of HAART. Resistance testing revealed the K65R, K103N, and Y181C mutations. HAART was changed to ritonavir-boosted darunavir and raltegravir. Three weeks later, the patient presented with a massive maculopapular rash, watery diarrhea, and subfebrile temperatures. His CD4 count was 781/ μ l (22 %), and the viral load was 1,660 copies/ml. An extensive search for opportunistic infections, including tuberculosis, was unsuccessful. Colonoscopy showed graft-versus-host disease-like colitis and ileitis (Fig. 1). This led to the diagnosis of a severe nonspecific immune reconstitution inflammatory syndrome (IRIS) due to the start of effective HAART. The differential diagnosis was a severe allergic reaction.

This is the first report of a graft-versus-host-form manifestation of an immune reconstitution inflammatory syndrome (IRIS). High viral load and low CD4 count at the initiation of HAART as well as the rapid increase in CD4 counts under HAART are major risk factors for IRIS [1],

all of which applied to our patient. The graft-versus-host-like reaction did not seem compatible with an allergic reaction. Taking all this into account, we assume that the patient suffered from IRIS—even in the absence of a specific test result [2].

Conflict of interest The authors declare that they have no conflict of interest.

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