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GI involvement in disseminated *Mycobacterium genavense*: endoscopy and histology

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1A 34-year-old man ultimately shown to have immunodeficiency and disseminated *Mycobacterium genavense* associated with protein-losing enteropathy presented with cachexia and generalized weakness. Physical examination revealed a cachectic man with generalized muscle wasting and a protuberant abdomen with shifting dullness, but without tenderness, rebound, or guarding. Laboratory data showed the following: white blood cell count, 4.8 K/ μ L (normal range 3.98–10.14 K/ μ L); hemoglobin, 13.6 g/dL (normal range 11.2–15.7 g/dL); platelet count, 73,000/ μ L (normal range 173–369 K/ μ L); sodium, 134 mmol/L (normal range 135–144 mmol/L); potassium, 3.7 mmol/L (3.3–5.1 mmol/L); urea nitrogen, 25 mg/dL (normal range 8–22 mg/dL); creatinine, 0.86 mg/dL (normal range 0.56–1.16 mg/dL); alkaline phosphatase, 153 U/L (normal range 37–116 IU/L); alanine aminotransferase, 84 U/L (normal range 6–41 U/L); aspartate aminotransferase, 120 U/L (normal range 9–34 U/L); total protein, 3.9 g/dL (normal range 6.4–8.2 g/dL); albumin, 1.4 g/dL (normal range 2.5–4.8 g/dL); prealbumin, 15 mg/dL (normal range 17–39 mg/dL); 24-hour stool α 1-antitrypsin level, 93 mg/dL (normal <54 mg/dL); trace urinary protein; negative HIV test results; IgG, 377 mg/dL (normal range 642–1730 mg/dL); IgA, 20 mg/dL

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(normal range, 91–499 mg/dL); IgM, less than 21 mg/dL (normal 34–342 mg/dL); and IgE, 2.4 mg/dL (normal range 0–90.0 IU/mL). CT scan of the abdomen and pelvis revealed nonspecific small-bowel thickening, sigmoid mucosal enhancement, and extensive mesenteric adenopathy (**A**). EGD revealed diffuse esophageal mucosal denudation and friability, mild thickening of the gastric and duodenal folds (**B**). Colonoscopy (**C**) showed mucosal edema, absence of vasculature, and loss of haustral folds. Biopsy specimens (**D,E**) revealed expansion of the lamina propria, which was filled with foamy macrophages that contained acid-filled bacilli, subsequently shown to be *M genavense*.

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Commentary

Atypical mycobacterial infection was described in the mid-1950s, although it was the AIDS epidemic that brought these nontuberculous mycobacteria to the familiarity of most clinicians. In 1959, the botanist Ernest Runyon grouped these organisms into 4 groups: photochromogens, which develop pigments in or after being exposed to light (eg, *Mycobacterium kansasii*); scotochromogens, which become pigmented in darkness (eg, *Mycobacterium scrofulaceum*); nonchromogens, a group of prevalent opportunistic pathogens that includes *Mycobacterium avium* complex (MAC) as well as *M genavense*; and finally, the rapid growers (eg, *Mycobacterium fortuitum*). *M genavense*, described by Bottger et al in 1992, is a fastidious organism that has a slow growth rate in liquid media, requiring 3 to 12 weeks to be identified. Although it can grow on solid media, it does not grow on standard solid media like Lowenstein-Jensen. *M genavense* infections occur only rarely in persons other than AIDS patients, although all patients infected with this organism are immunocompromised. *M genavense* resembles MAC in its clinical infection patterns and is a good organism to keep in mind when faced with an AIDS patient who has diarrhea, fever, and lymphadenopathy. Interestingly, *M genavense* is common in birds, especially passerines (which include songbirds and sparrows) and psittacines (which include parrots and parakeets). We must wage war against *M genavense*, the name of which derives from Geneva, the source of the first isolate. But must we respect the conventions also named after the same city in this battle? There are 4 Geneva conventions (and 3 protocols), which set the standards for humanitarian treatment of the victims of war and were conceived by Henri Dunant after his witnessing the horrors of war at the Battle of Solferino in 1859. I would treat the patient as humanely and kindly as possible and bring all force to bear to annihilate the invader. John F. Kennedy said “Mankind must put an end to war before war puts an end to mankind.” In this case, a battle won will enable man’s survival ... and we can then deal with the immunocompromise that allowed the invasion to occur.