Radiographic Findings of Lupus Related Entero-colitis

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Received: 11 November 2021 / Revised: 16 February 2022 / Accepted: 17 February 2022 / Published online: 19 February 2022
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Keywords Entero-colitis · Systemic lupus erythematosus · Target sign · Vasculitis

Presentation

A 28-year-old Caucasian woman presented to the hospital with chest pain, dyspnea and fevers (37.9 °C). She was found to have pericarditis with exudative bilateral pleural effusions. She had experienced 1-week of generalized abdominal pain and watery non-bloody diarrhea. Stool studies were negative for infectious etiology. Rheumatologic investigation showed C-reactive protein 16.54 mg/dL, C3 61.1 mg/dL, ANA titer > 1:5120, DNA antibody 1:640, and positive lupus anticoagulant. She was diagnosed with systemic lupus erythematosus (SLE) using the American College of Rheumatology (ACR) criteria. CT of the abdomen (portal venous phase) revealed mural edema of the ileum in a striking “target sign” pattern (Fig. 1A), enhancement of the cecum (Fig. 1B), and sigmoid colon. There was mild ascites but no mesenteric vessel abnormality. Colonoscopy visualized mucosal inflammation and ulcers in the cecum, ascending and sigmoid colon, with biopsies showing acute inflammation (neutrophilic infiltration). The clinical presentation and evaluation were consistent with lupus-associated enterocolitis. She was treated with methylprednisolone 60 mg IV daily and hydroxychloroquine 200 mg orally twice daily, with improvement in symptoms. She was discharged on an oral prednisone taper.

Discussion

In previous reports, similar CT findings of “target-like” appearance demonstrating thickening of the small bowel as with our case have been reported. Kaneko et al. reported these findings in a case of recurrent lupus enteritis. Additionally, they reported an “accordion-like” appearance of the small bowel on abdominal ultrasound imaging. This is related to edematous thickening of the small bowel, where the Kerkring folds with submucosal edema resemble an accordion [1]. The disappearance of these radiographic findings indicates a good response to therapy. Hence, these characteristic findings on CT and ultrasound can aid in the diagnosis of lupus entero-colitis as well as monitoring the efficacy of treatment [1]. Bang et al. reported a case of cytomegalovirus (CMV) enteritis causing ileal perforation in a patient with underlying SLE enteritis. The diagnosis is made using tissue sample demonstrating CMV-specific immunostaining. The pathophysiology of CMV-induced injury is related to ischemic mucosal injury, and can have similar clinical, radiologic, and endoscopic findings as SLE enteritis [2]. It is important to investigate and exclude other causes of small bowel thickening such as infectious enteritis in SLE patients. In our patient, the suspicion for CMV was low due to no prior immunosuppressive therapy, and ileo-colonic biopsies with negative CMV immunostaining.

The clinical picture of lupus entero-colitis is nonspecific, with typical manifestations including abdominal pain, diarrhea, and vomiting. Mesenteric vasculitis is the underlying mechanism. Common sites of involvement are the jejunum (80%) and ileum (85%) [3]. Diagnosis is based on classical CT findings of bowel wall edema > 3 mm (called “target sign”), engorgement of mesenteric vessels (called “coombs sign”), and increased attenuation of mesenteric fat [4]. Lupus entero-colitis occurs in the setting of active SLE, presenting as an acute ischemic enteritis involving the small bowel (incidence of 0.2–9.7%), and/or as chronic ulcerations in the

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Fig. 1 **A** Contrast-enhanced CT of the abdomen revealed mural edema (> 3 mm) of the ileum in a striking ‘target sign’ pattern consistent with enteritis. **B** Contrast-enhanced CT of the abdomen also revealed enhancement of the cecum consistent with colitis

large bowel (incidence of 0.2%) [5, 6]. Lupus entero-colitis is a rare complication of a rare disease. Maybe enteritis can occur in SLE patients. Any new abdominal pain or diarrhea in a patient with SLE should be promptly evaluated, as delayed diagnosis could result in bowel ischemia and perforation.

Author contributions Conception and design (PMJ, AVP).

Drafting of the article (PMJ, AVP).

Critical revision of the article for important intellectual content (PMJ, AVP).

Final approval of the article (PMJ, AVP).

Declarations

Informed consent Informed consent was obtained from the patient for purposes of this submission including the associated images.

Disclosures None.

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