Antibiotic-associated hemorrhagic colitis with ischemic change

A 67-year-old woman presented with abdominal pain and hematochezia. She had never used non-steroidal anti-inflammatory drugs, but had been started on amoxicillin, clarithromycin, and lansoprazole 3 days earlier as *Helicobacter pylori* eradication therapy. On admission, white blood cell count was 21 600/µL and C-reactive protein level was 2.8mg/dL. Computed tomography showed thickening of the intestinal wall from the ascending to transverse colon (●Fig. 1). No occlusion of the superior mesenteric artery was found.

We prohibited ingestion and started an intravenous drip without antibiotic. *Klebsiella oxytoca* was detected in culture of a fecal sample taken on admission, and negative results were obtained for *Clostridium difficile* toxin. On hospital day 4, colonoscopy revealed a deep longitudinal ulcer in the colon with dark purple color change (● Fig. 2). Pathological examination of a biopsy specimen showed necrosis and desquamation of the surface epithelium, along with severe neutrophil infiltration in the lamina propria (● Fig. 3).

The patient gradually improved, and follow-up endoscopy was performed on hospital day 16. The lesion had completely disappeared (● Fig. 4), together with her complaints and blood test abnormalities. Antibiotic-associated hemorrhagic colitis (AAHC) is a well-known complication after taking antibiotics, mainly penicillins, however, the underlying mechanism remains unknown. Some reports have suggested *K. oxytoca* as the cause [1,2], but this bacterium has not been consistently isolated [3]. Diffuse mucosal hemorrhage is described as a typical endoscopic finding of AAHC, whereas ulceration is uncommon [3]. Although a variety of pathological changes have been reported in AAHC, few reports have described longitudinal ulceration. The major pathological findings seem to be intramucosal hemorrhage with generally little inflammatory cell infiltration [4, 5].

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