Visible mucosal changes of pseudomembranous colitis in a sigmoid colostomy

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We visited an 82-year-old man who was receiving palliative home care for acute myelogenous leukemia. He had a sigmoid colostomy because of rectal cancer. Two weeks previously, he had received piperacillin–tazobactam for 7 days for cellulitis. We noticed stomal swelling, with irregularly distributed white-to-yellow spots (Figure 1A); however, he was otherwise asymptomatic. Suspecting a candida or cytomegalovirus infection, we swabbed the spots; microscopic examination showed neutrophils and histiocytes without microorganisms. On the next visit 1 week later, the patient had watery diarrhea containing a small amount of blood. As he had a history of recent antibiotic use, we suspected a *Clostridioides difficile* infection. We submitted a stool sample to test for glutamate dehydrogenase (GDH) antigen and for *C. difficile* toxins. Results were positive for GDH antigen and negative for toxins on that day. However, the sample was positive for toxins 4 days later. We diagnosed pseudomembranous colitis caused by *C. difficile* infection. We avoided using metronidazole owing to its known adverse effects, which include loss of appetite and nausea that would adversely affect the patient's quality of life. We treated him with oral vancomycin for 10 days. On day 4 of treatment, the pseudomembranes had enlarged (Figure 1B). Although we could not be sure that the change was part of the natural disease course, we continued the treatment as the patient was well, apart from having diarrhea. By the end of treatment, his diarrhea and stoma had improved, and the pseudomembranes had disappeared (Figure 1C).

We suggest that clinicians routinely examine colostomy sites in immunodeficient patients for early detection of pseudomembranes. This allows timely diagnosis of pseudomembranous colitis caused by microorganisms such as *C. difficile*, cytomegalovirus and candida, among other causes.[1–3]
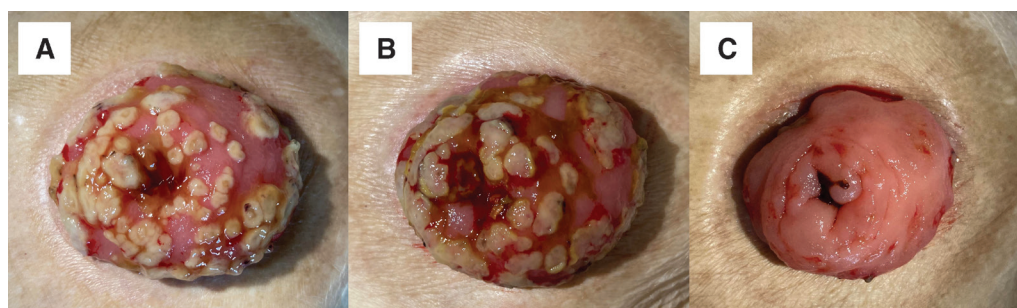

Figure 1: Changes in the appearance of a sigmoid colostomy stoma during pseudomembranous colitis from *Clostridioides difficile* infection in an 82-year-old man who was receiving palliative home care for acute myelogenous leukemia. (A) One week before the onset of diarrhea, the stoma was swollen, with irregularly distributed, white-to-yellow spots. (B) On day 4 of treatment with oral vancomycin, the stoma was slightly hemorrhagic, and each pseudomembrane was enlarged. (C) One day after a 10-day course of oral vancomycin, the swelling of the stoma had improved and the pseudomembranes had disappeared.

References

1. Salagre A, Galovart MT, Ciriza De Los Ríos C, et al. Candida colitis: an endoscopic diagnosis. *Gastrointest Endosc* 2018;88:780.
2. Le PH, Kuo CJ, Wu RC, et al. Pancolitis associated with higher mortality risk of cytomegalovirus colitis in patients without inflammatory bowel disease. *Ther Clin Risk Manag* 2018;14:1445-51.
3. Tang DM, Urrunaga NH, von Rosenvinge EC. Pseudomembranous colitis: not always *Clostridium difficile*. *Cleve Clin J Med* 2016;83:361-6.

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