Leukemoid reaction in pseudomembranous colitis


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Neutrophilic leucocytosis above 50 x 10^9/l exclude leukemia, defines a leukemoid reaction (LR). It is associated with several diseases. Tumor-related LR is more common. We reported a case of pseudomembranous colitis related LR and the LR disappeared after well control.

Case report

A 70-year-old man, was admitted to our hospital due to pneumonia. During the admission, he received medical treatment. He was discharged one week later and regular took oral antibiotics. Three weeks later, he presented with abdominal pain and diarrhea off and on for several days. Physical examination showed no particular finding. Laboratory test results showed leukocytosis (69.8 x 10^3/μL) with a neutrophil predominant differential cell counts. Abdominal plain film showed ileus. Computed tomography showed marked dilatation edematous wall thickening of ascending colon and cecum (Fig. 1). Colonoscopy showed yellowish plaques in ascending and transverse colon (Fig. 2). Stool assay study proved presence of Clostridium difficile.

The leukocytosis resolved after treatment of metronidazole.

Discussion

The WBC count more than 50 x 10^9/l associated with a cause outside the bone marrow is termed as leukemoid reaction (LR) (1). The major causes of LR include severe infection, intoxications, malignancies, severe hemorrhage, or acute hemolysis (2).

C. difficile infection typical causes fever, diarrhea, abdominal pain, or ileus (3). It has been associated with leukocytosis, 9% of hospitalized adults whose WBC exceeded 15 x 10^9/l (3,4). Marinella MA et al. also reported C. difficile is associated with LR (5). Patients with C. difficile colitis and a leukocyte count greater than 35 x 10^9/l have a poor prognosis. The mortality rate would be higher than patients who have C. difficile without a LR.
Our patient presented with progressive leukocytosis and colonoscopy proved pseudomembranous colitis. After well treatment, the WBC returned to normal range. Although Marinella et al. reported higher mortality in patients with C. difficile colitis; this case presented with good result after medical treatment. We think the LR will be appeared in patients with pseudomembranous colitis and disappeared after well control of infection.

Fig. 2. Colonoscopy showed yellowish plaques in ascending and transverse colon.

References