Cartas al Director

Leukemoid reaction in pseudomembranous colitis

Palabras clave: Reacción leucemoide. Leucocitosis. Colitis pseudomembranosa. *Clostridium difficile*.

Key words: Leukemoid reaction. Leukocytosis. Pseudomembranous colitis. *Clostridium difficile*.

Dean Editor:

Neutrophilic leukocytosis above $50 \times 10^9/l$ 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 ($69.8 \times 10^3/uL$) 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.

Fig. 1. Computed tomography with contrast showed marked dilatation edematous wall thickening of ascending colon and cecum.

Discussion

The WBC count more than $50 \times 10^9/l$ 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 $15 \times 10^9/l$ (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 $35 \times 10^9/l$ have a poor prognosis. The mortality rate would be higher than patients who have *C. difficile* without a LR.

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

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.

Lin CH, Chou MH¹, Liu CT², Tsai YC³,
Chuang CH and Yu JC

Division of General Surgery. Department of Surgery. Tri-Service General Hospital. National Defense Medical Center. Taipei. ¹Department of Speech Communication. Shih Hsin University. Taipei. ²Department of Surgery. Yee-Zen General Hospital. Taoyuan. ³Department of Surgery. Chung-Shan Memorial Hospital. Taipei, Taiwan

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