LETTER TO THE EDITOR

Sepsis is a more important risk factor for cytomegalovirus colitis in human-immunodeficiency virus-negative adults with chronic kidney disease

We read with great interest the article by Chen et al1 in the Journal of Microbiology, Immunology and Infection. The authors reported that cytomegalovirus (CMV) disease may occur in chronic kidney disease patients without overt immunodeficiency, and that the gastrointestinal tract, especially the colon, has been recognized as the most common site. They also mentioned that chronic kidney disease is a CMV-prone condition, especially in patients with end-stage renal disease. A cumulative of risk factors have a greater risk of CMV reactivation, and sepsis has an extra strong additive value for risk factor.2

In Chen et al's1 study, 92.9% of CMV disease is present in the gastrointestinal tract, and nine patients had colitis. In our study,2 a retrospective review of 15 patients with a histopathological diagnosis of CMV colitis showed that the most common presentation is bloody stool, followed by persistent diarrhea. Six patients had end-stage renal disease. Nearly all patients had a condition of sepsis and were treated with extended (>10 days) broad-spectrum antibiotics. Serum anti-CMV immunoglobulin M shows a weak predictive value, and routine serum test surveillance might not advance an earlier treatment on CMV disease. In colonscopic view in our patient series, most CMV colitis is presented as multiple large (>2 cm) geographic shallow ulcer with profound subepithelial ecchymosis at the distal colon, and polyloid lesion formation with necrotic tissue found in patients with advanced disease. All of our patients received ganciclovir, and four of them died.3

Chen et al1 concluded that CMV disease may occur in chronic kidney disease patients in the absence of overt immunodeficiency. But most CMV diseases were related to CMV reactivation, which is poorly understood in relation to a chronic kidney disease. Arising evidence indicates that sepsis is a risk factor for CMV reactivation.2 Listed risk factors for CMV disease in an article by Ko et al1 include neurologic disease, rheumatologic disease, required intensive care, red blood cell transfusion, and exposure to antibiotics, antacids, and steroids. In our study,3 we suggested that an addition of sepsis to CMV-prone conditions is more likely to be a major contributor in CMV colitis. We also suggest that other conditions that associated with sepsis could be presented as bloody stool or persistent diarrhea. The reasons are that the patient with sepsis with the use of a broad spectrum antibiotic has an increased risk of pseudomembranous colitis,2 and that a patient with septic shock may have the possibility of ischemic colitis. Both conditions are indistinguishable from CMV colitis clinically, hence an early endoscopic and histopathological studies are mandatory.

In summary, a patient with chronic kidney disease who is concomitant with sepsis has a higher risk of CMV reactivation. Therefore, clinicians should also be aware of the risk in patients with lower gastrointestinal symptoms.

Conflicts of interest

All contributing authors declare no conflicts of interest.

References


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