Cytomegalovirus and tuberculous colitis in a cirrhotic patient: A case report

Pannawadee Uppathamnarakkorn, Chusana Suankratay

Background: Cytomegalovirus (CMV) disease is usually reported in immunocompromised hosts including those receiving organ transplant, steroids, and immunosuppressive agents as well as AIDS patients; it was rarely observed in other kinds of hosts. While extrapulmonary tuberculosis is commonly described in patients living in endemic areas, either in immunocompromised and immunocompetent hosts. In this report, we describe a cirrhotic female patient with CMV and tuberculous colitis.

Case report: A 66-year-old previously healthy female presented with fever and jaundice for 7 days, and drowsiness for 1 day. Physical examination revealed a febrile drowsy patient with moderate jaundice but without chronic liver stigmata. Complete blood count (CBC) analysis showed mild leukocytosis with neutrophilia, and prolonged prothombin time. Blood urea nitrogen and creatinine were 81 and 4.3 mg/dL, and liver function test showed total bilirubin of 10.1 (direct bilirubin of 9.0) mg/dL, aspartase transaminase of 833 IU/L, alanine transaminase of 2,998 IU/L, alkaline phosphatase of 109 IU/L, alkaline phosphatase of 109 IU/L, and albumin of 3.3 g/dL. All serologic tests of HAV, HBV, HCV, and HEV, agent of scrub and murine typhus were negative. Serum IgM against Dengue virus, EBV, HSV, and CMV were negative. Antinuclear antibody was negative. Abdominal ultrasonogram was normal. A diagnosis of acute liver failure with undetermined etiology was made. She gradually improved with symptomatic and supportive treatments.

Four weeks after discharge, she still had a low-grade fever and developed progressive ascites. Ascites analysis revealed white blood cells of 110 cells/mm³ (lymphocyte 80%), serum-ascites albumin gradient of 0.9, and negative results of malignant cells, acid-fast bacilli stain, and Mycobacterium tuberculosis PCR. Abdominal computed tomogram (CT) revealed eccentric thickening of bowel wall at ascending colon with adjacent fat strandings, enlarged left lobe of the liver with nodular surface, and marked ascites. Colonoscopy revealed a colonic ulcer, 2.5 cm in diameter, 85 cm from anal verge, in accompanying with a polypoid cauliflower-like mass, 3.5 cm in size at the splenic flexure. Histopathology of the biopsied mass showed acute colitis and organizing inflammation with focal histiocytic aggregations. A diagnosis of Crohn’s disease was made, and she was received prednisolone 40 mg/day. Three weeks after treatment, a colonoscopy was performed and revealed no improvement of all colonic lesions. Histopathology of another biopsied specimen showed an organizing ulcer with few atypical cells containing intranuclear and intracytoplasm inclusions with positive CMV antigen immunostain. Her CMV viral load in the blood was < 600 copies/mL. Prednisolone was discontinued, and she had received valganciclovir treatment. Eight weeks after treatment, colonoscopy showed marked improvement of all lesions. CT revealed no ascites and improvement of the bowel wall thickening. The ascites culture eventually grew M. tuberculosis. We then treated the patient with 4 anti-tuberculous drugs including isoniazid, rifampicin, ethambutol, and ofloxacin. The patient made a full recovery when last seen 3 months after treatment with both valganciclovir and anti-tuberculous drugs.

Conclusions: To our knowledge, this is the first case report of CMV and tuberculous colitis in a cirrhotic patient.