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Infections with Herpesviruses II: Epstein-Barr Virus, Cytomegalovirus, Human Herpesviruses 6 and 7, and Kaposi's Sarcoma-Associated Herpesvirus

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Infections with Herpesviruses II: Epstein-Barr Virus, Cytomegalovirus, Human Herpesviruses 6 and 7, and Kaposi's Sarcoma–Associated Herpesvirus

INTRODUCTION

This manual, the second installment of a 2-part series on infections with human herpesviruses (HHVs), will focus on Epstein-Barr virus (EBV; HHV-4), cytomegalovirus (CMV; HHV-5), HHV-6, HHV-7, and Kaposi's sarcoma–associated herpesvirus (HHV-8). The first installment, published in Volume 7 Part 4 of the *Hospital Physician Infectious Diseases Board Review Manual*, discussed herpes simplex virus types 1 (HHV-1) and 2 (HHV-2) and varicella-zoster virus (HHV-3).

CASE PRESENTATIONS

CASE PRESENTATION 1

A 19-year-old male college student comes to the student health clinic because of a 1-week history of low-grade fever, swollen glands, mild fatigue, and an intermittent rash that only appears after soccer practice. Physical examination reveals a temperature of 37.8°C (100.1°F), mild conjunctival and oropharyngeal erythema with a few petechiae over the soft palate, moderate posterior cervical lymphadenopathy, and a spleen tip that can be palpated 2 cm below the left costal margin. No rash is present at the time of examination. Results of laboratory testing show a leukocyte count of $13.2 \times 10^3/\text{mm}^3$, a platelet count of $114 \times 10^3/\text{mm}^3$, and mildly elevated serum levels of aspartate aminotransferase (AST, SGOT) and alanine aminotransferase (ALT, SGPT).

CASE PRESENTATION 2

A 41-year-old man with AIDS calls the clinic where his condition has been followed monthly for the past 2 years to report difficulty with vision in his right eye. He says that over the past 3 to 4 days, he has intermittently seen floaters in that eye. Medical history is sig-

nificant for progressive HIV disease manifested by virologic failure and a decrease in his absolute CD4+ T-lymphocyte count to $43/\text{mm}^3$, despite treatment with multiple antiretroviral regimens.

CASE PRESENTATION 3

A 6-month-old female infant is brought to the emergency department by her mother shortly after having a generalized seizure. She has a 2-day history of fever, irritability, and nasal congestion. Temperature is 39.5°C (103.1°F); she is lethargic but arousable. There is no meningismus or focal neurologic findings. Analysis of cerebrospinal fluid is unremarkable. For the past 2 days, she has not attended her day-care facility, where a toddler was recently diagnosed with exanthema subitum (also referred to as *roseola* and *sixth disease*).

CASE PRESENTATION 4

A 46-year-old man who has advanced AIDS reports a 1-month history of fever, weight loss, and shortness of breath. Physical examination reveals prominent right anterior cervical lymphadenopathy, dullness to percussion at the lung bases, and hepatosplenomegaly. Results of laboratory testing show pancytopenia. Computed tomography scans of the chest and abdomen reveal bilateral hilar and retroperitoneal lymphadenopathy with small bilateral pleural effusions and hypodense lesions in the liver and spleen. Results of lymph node biopsy and cytologic analysis of pleural fluid demonstrate lymphomatous cells of similar morphology and immunophenotype.

EPSTEIN-BARR VIRUS

HISTORICAL PERSPECTIVE

EBV was known as glandular fever in the 19th century. In 1932, sheep erythrocyte agglutinins were identified