

HOSPITAL PHYSICIAN®

INTERNAL MEDICINE BOARD REVIEW MANUAL

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The *Hospital Physician Internal Medicine Board Review Manual* is a peer-reviewed study guide for residents and practicing physicians preparing for board examinations in internal medicine. Each manual reviews a topic essential to the current practice of internal medicine.

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Management of HIV Infection; Approach to Incidentally Discovered Renal Masses

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Management of HIV Infection

Holly Rawizza, MD, and Paul E. Sax, MD

INTRODUCTION

Primary care physicians often provide point of entry health care to patients with undiagnosed human immunodeficiency virus (HIV) infection. Through early diagnosis and management of patients with HIV infection, physicians can significantly impact both individual patient health as well as public health. In addition, costs to the U.S. health care system can be reduced by making diagnoses prior to the development of opportunistic infections, as these complications result in lengthy hospitalizations and lost wages.

According to U.S. Centers for Disease Control and Prevention (CDC) estimates at the end of 2003, approximately 1 to 1.2 million persons with HIV infection were estimated to be living in the United States.¹ With estimates that nearly a quarter of these people are unaware of the diagnosis, the need to identify undiagnosed individuals is critical. Patients with primary HIV are highly infectious due to high virus load in the blood (typically > 100,000–1 million copies/mL) and genital secretions. In a retrospective study of discordant couples living in Uganda, recently acquired infection was associated with the highest rates of transmission.² Thus, primary care physicians have a critical role in diagnosing new infection, preventing transmission, and providing appropriate care for HIV infected patients in the primary care setting.

This review presents case-based discussions that provide essential information to diagnose and perform initial evaluations of persons with HIV, initiate basic antiretroviral regimens, evaluate and prevent common medication interactions, and provide postexposure HIV prophylaxis.

CASE I

A 41-year-old man with a congenital bicuspid aortic valve and aortic insufficiency complicated by a prior episode of infective endocarditis presents with fever, headache, and diarrhea of 7 days' duration. He is not taking any medications. The social history is unremark-

able for any recent travel. He is sexually active with other men and reports rare unprotected intercourse.

Laboratory evaluation reveals significant leucopenia (white blood cell [WBC] count nadir, 1700 cells/ μ L) and thrombocytopenia (platelet nadir of 89 K/ μ L). Given the possibility of recurrent endocarditis, he is initially treated with empiric vancomycin and gentamicin. However, blood cultures are negative and transthoracic echocardiogram reveals no valvular vegetations. Extensive evaluation including an HIV antibody test and serology studies for tick-borne illnesses are negative. Due to a persistent headache, he undergoes lumbar puncture, which reveals a glucose level of 72 mg/dL, protein level of 34.5 mg/dL, red blood cell count of 1980 cells/mm³, and WBC count of 110 cells/mm³ (20% monocytes and 80% macrophages). Despite the initial negative HIV antibody test, a HIV viral load (HIV RNA) is obtained and is greater than 500,000 copies/mL.

- **Which symptoms or findings should prompt an evaluation for HIV infection? How is the diagnosis of acute HIV infection established? What tests are available for diagnosis of HIV infection and how accurate are such tests?**

DISCUSSION

With the *MMWR Morbidity and Mortality Weekly Report* article published on 5 June 1981 discussing 5 cases of *Pneumocystis carinii* pneumonia (PCP) among previously healthy homosexual men living in Los Angeles,³ AIDS burst into the consciousness of the world and has continued to have a profound impact on the health and economics of many countries. (*Pneumocystis carinii* is now called *Pneumocystis jiroveci*.)

By the late 1980s, it appeared that the education efforts and activism focusing on disease awareness among men who have sex with men (MSM) to curb the epidemic was having an appreciable impact on AIDS incidence within this high-risk group. However, by the end of the 1990s, the trend toward decreasing incidence among MSM had reversed, and it has been steadily rising since. From 2003 to 2004, the number of HIV/AIDS diagnoses among MSM increased by 8%.⁴ However, although MSM continue to account for the largest