Beth Israel Deaconess Medical Center
Healthcare Associates HIV Manual

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Howard Libman, MD, FACP

Director, HIV Program, Healthcare Associates
Divisions of General Medicine and Primary Care
and Infectious Diseases
Beth Israel Deaconess Medical Center, Boston

Professor of Medicine
Harvard Medical School

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The recommendations contained in this monograph are based upon published guidelines for HIV-infected adults. Because the field of HIV disease is constantly advancing and standards of practice continue to evolve, clinicians should be familiar with the current medical literature and request consultations as necessary.

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Comments are welcome and can be sent to the author at hlibman@bidmc.harvard.edu.

Overview

The care of HIV-infected patients has undergone dramatic changes over the past two decades with the advent of combination antiretroviral therapy and the introduction of viral load testing and resistance testing in clinical practice. Patients are hospitalized less frequently with opportunistic infections and are living longer. However, with this encouraging news have come important challenges. For patients, they include long-term adherence to a medical regimen and dealing with its toxicities. For health care practitioners, they include keeping up with a rapidly changing but incomplete knowledge base and addressing the needs of complicated outpatients within time constraints.

The management of HIV disease lends itself to a primary care approach. Most successful models are multidisciplinary. In addition to history and physical examination, the initial evaluation of HIV-infected patients should include assessment of their knowledge of the disease and emotional state. Baseline laboratory studies are performed to screen for occult disease and guide drug usage, to determine HIV disease status, and to look for evidence of concurrent infections. The CD4 cell count and viral load are essential for staging and guiding therapeutic decisions. The diagnosis and management of chronic hepatitis and tuberculosis remain significant challenges in HIV-infected patients.

Antiretroviral therapy is recommended in all HIV-infected patients regardless of their clinical status or CD4 cell count. There are both individual (decreased morbidity and mortality) and public health (decreased sexual transmission) benefits of treatment. The strength of antiretroviral therapy recommendations and evidence supporting them are greater in patients with lower CD4 counts.

The recommended initial regimen is a nucleoside reverse transcriptase inhibitor (NRTI) x 2 *plus* a non-nucleoside reverse transcriptase inhibitor (NNRTI), boosted protease inhibitor (PI), or integrase inhibitor (II). Drug combinations over the past few years have consisted of fewer pills that are dosed less frequently and associated with fewer side effects. Factors that may have a negative impact on adherence should be reviewed and addressed prior to initiation of therapy. About three-quarters of patients will achieve maximal viral suppression with their initial regimen, and the majority of these will continue to have undetectable virus on a long-term basis. The success rate diminishes progressively with subsequent regimens. All HIV-infected patients, regardless of whether they are receiving antiretroviral therapy, should be monitored with laboratory tests every three to six months. HIV resistance testing is indicated at baseline and when the viral load is not maximally suppressed in patients on antiretroviral therapy.

Complications have been associated with long-term combination antiretroviral therapy. These include: 1) lipodystrophy syndrome (body fat maldistribution, hyperlipidemia, glucose intolerance); 2) lactic acidemia/acidosis; 3) premature osteopenia and osteoporosis; 4) avascular necrosis of hips; 5) peripheral neuropathy; and 6) probably an increased risk of atherosclerotic disease.

Opportunistic infection (OI) prophylaxis for PCP is indicated if CD4 count < 200/mm^3; TMP-SMX is the drug of choice. Prophylaxis for toxoplasmosis is indicated in patients with positive toxoplasmosis serology if CD4 count < 100/mm^3. Prophylaxis for MAC infection is indicated if CD4 count < 50/mm^3; azithromycin is the drug of choice. OI prophylaxis can often be safely discontinued for many infections following immune reconstitution with combination antiretroviral therapy.

Routine health care maintenance issues in HIV-infected patients include immunizations (e.g., pneumococcal, hepatitis B, hepatitis A, and influenza vaccines), periodic screening for concurrent infections (e.g., syphilis, other STDs, and tuberculosis), regular Pap smears in women (and perhaps anal Pap smears in at-risk populations), and other age- and sex-appropriate interventions.