

TB Elimination

Special Considerations for Treatment of TB Disease in Persons Infected with HIV

Introduction

The management of HIV-related tuberculosis (TB) disease is complex. Although the treatment of TB in people with HIV is largely the same as for patients without HIV, there are some important differences.

Recommended Regimen

The recommended treatment of TB disease in adults infected with HIV (when the disease is caused by organisms that are known or presumed to be susceptible to first-line drugs) is a 6-month daily regimen consisting of:

- An **intensive phase** of isoniazid (INH), a rifamycin (see Drug Interactions below), pyrazinamide (PZA), and ethambutol (EMB) for the first 2 months.
- A **continuation phase** of INH and a rifamycin for the last 4 months.

Once-weekly INH and rifapentine in the continuation phase should not be used in any patient infected with HIV.

Six months is the minimum duration of treatment for adults with HIV, even for patients with culture-negative TB. In the uncommon situation in which HIV-infected patients do NOT receive antiretroviral therapy during tuberculosis treatment, prolonging treatment to 9 months (extend continuation phase to 7 months) is recommended. Prolonging treatment to 9 months (extend continuation phase to 7 months) for HIV-infected patients with delayed response to therapy (e.g., culture positive after 2 months of treatment) should be strongly considered.

Anti-retroviral Therapy During Tuberculosis Treatment

Anti-retroviral therapy should be initiated during tuberculosis treatment, rather than at the end, to

improve outcomes among tuberculosis patients co-infected with HIV. Anti-retroviral therapy should ideally be initiated within the first 2 weeks of tuberculosis treatment for patients with CD4 cell counts <50/mm³ and by 8-12 weeks of tuberculosis treatment initiation for patients with CD4 cell counts ≥50/mm³. An important exception is HIV-infected patients with tuberculosis **meningitis**, in whom antiretroviral therapy **should not** be initiated in the first 8 weeks of antituberculosis therapy.

Drug Interactions

A major concern in treating TB in people infected with HIV is the interaction of rifampin (RIF) with certain antiretroviral agents (some protease inhibitors [PIs] and nonnucleoside reverse transcriptase inhibitors [NRTIs]). Rifabutin, which has fewer problematic drug interactions, may be used as an alternative to RIF.

As new antiretroviral agents and more pharmacokinetic data become available, these recommendations on managing interactions are likely to be modified.

Case Management

Directly observed therapy (DOT) and other adherence promoting strategies should be used in all patients with HIV-related TB. The care for HIV-related TB should be provided by, or in consultation with, experts in management of both TB and HIV. The care for persons with HIV-related TB should include close attention to adherence to both regimens of TB and antiretroviral treatment, drug-drug interactions, paradoxical reaction or Immune Reconstitution Inflammatory Syndrome (IRIS), side effects for all drugs used, and the possibility of TB treatment failure or relapse.

August 2016

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention

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For More Information

1. Official American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America Clinical Practice Guidelines: Treatment of Drug-Susceptible Tuberculosis. Clin Infect Dis. (2016). Available online at <http://cid.oxfordjournals.org/content/early/2016/07/20/cid.ciw376.full>
2. Guidance documents for the medical management of HIV. Available online at www.aidsinfo.nih.gov/guidelines/
3. Updated Guidelines for the Use of Rifamycins for the Treatment of Tuberculosis Among HIV-Infected Patients Taking Protease Inhibitors or Nonnucleoside Reverse Transcriptase Inhibitors. MMWR 2004; 53 (No. 2). www.cdc.gov/mmwr/preview/mmwrhtml/mm5302a6.htm
4. Managing Drug Interactions in the Treatment of HIV-Related Tuberculosis. http://www.cdc.gov/tb/publications/guidelines/TB_HIV_Drugs/default.htm
5. General Considerations for Treatment of TB Disease (Fact Sheet). Available online at <http://www.cdc.gov/tb/publications/factsheets/treatment.htm>

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