TB Elimination
General Considerations for Treatment of TB Disease

Introduction

Treating tuberculosis (TB) disease benefits not only the individual patient but the community as a whole. Thus, any health care provider undertaking treatment of a patient with TB, whether a public health or private practitioner, is assuming a public health function that includes the responsibility for not only prescribing an appropriate regimen but also ensuring the patient's adherence to the regimen until treatment is completed.

Recommended Regimens

There are 10 drugs currently approved by the U.S. Food and Drug Administration (FDA) for treating TB. Of the approved drugs, the first-line anti-TB agents that form the core of treatment regimens are

- isoniazid (INH),
- rifampin (RIF),
- ethambutol (EMB), and
- pyrazinamide (PZA).

Regimens for treating TB disease have an intensive phase of 2 months, followed by a continuation phase of either 4 or 7 months. The continuation phase should be extended to 28 weeks for patients who have cavitation on the initial chest film and positive sputum cultures after 2 months of treatment. Treatment completion is determined by the number of doses ingested over a given period of time. Although basic TB regimens are broadly applicable, there are modifications that should be made under special circumstances (i.e., HIV infection, drug resistance, pregnancy, or treatment of children). Listed below are the basic regimens; please refer to Treatment of TB[1] for all options for the treatment of drug-susceptible TB.

Basic TB Treatment Regimens

Preferred Regimen	Alternative Regimen	Alternative Regimen
Intensive Phase Daily INH, RIF, PZA, and EMB* for 40-56 doses** (8 weeks)	**Intensive Phase** Daily INH, RIF, PZA, and EMB* for 14 doses (2 weeks), then three-times-weekly for 18 doses (6 weeks)	**Intensive Phase** Three-times-weekly INH, RIF, PZA, and EMB* for 24 doses (8 weeks)
Continuation Phase Daily INH and RIF for 90-126 doses** (18 weeks) or three-times weekly INH and RIF for 54 doses (18 weeks)	**Continuation Phase** Three-times-weekly INH and RIF for 54 doses (18 weeks)	**Continuation Phase** Three-times-weekly INH and RIF for 54 doses (18 weeks)

* EMB can be discontinued if drug susceptibility studies demonstrate susceptibility to first-line drugs.

** Guidelines allow dosing 5 or 7 days-a-week; 5 days-a-week administration by DOT is an acceptable alternative to 7 days-a-week administration.

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HIV-negative Persons

A continuation phase of once-weekly INH and rifapentine can be used for HIV-negative patients who do not have cavities on the chest film and who have negative acid-fast bacilli (AFB) smears at the completion of the intensive phase of treatment.

Case Management

Patient-centered case management should be used in the treatment strategy with an adherence plan that includes directly observed therapy (DOT). DOT is a strategy in which a health care worker or another designated person watches the TB patient swallow each dose of the anti-TB drugs. All patients taking drugs fewer than 7 days per week (e.g., 1, 2, 3, or 5 days a week) must receive DOT.

Follow-up Evaluations

Sputum specimens for microscopic examination and culture should be obtained from patients diagnosed with TB disease at a minimum of monthly intervals until two consecutive specimens are negative on culture. It is critical to obtain a sputum specimen at the end of the intensive phase (2 months) to determine if the continuation phase should be extended. In addition, it is essential that patients have clinical evaluations at least monthly to identify possible adverse effects of the anti-TB medications and to assess adherence. All patients with TB disease should have counseling and testing for HIV.

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/63/7/e147

2. Special Considerations for Treatment of TB Disease in Persons Infected with HIV (Fact Sheet). Available online at http://www.cdc.gov/tb/publications/factsheets/treatment.htm

http://www.cdc.gov/tb

August 2016