

Latent Tuberculosis Infection (LTBI) Diagnosis and Management Guideline in HIV negative patients

Diagnosis

- Tuberculin Skin Test (TST)
 - Evaluate the amount of induration compared to patient’s exposure risk
- Interferon-Gamma Release Assays (IGRA)
 - Evaluate the test result compared to patient’s pre-test probability

Before being seen in clinic all patients with a positive TST or IGRA should be evaluated for active tuberculosis utilizing clinical symptoms and a chest radiograph.

Management

Patients should be evaluated on a case by case basis for the optimal choice of treatment for LTBI. Factors to be considered include co-morbid conditions, drug interactions, patient preference, and cost.

Treatment:

- First line Regimen
 - Four Months of daily Rifampin
- Also Preferred
 - Three Months of weekly Isoniazid Plus Rifapentine
- Alternative Regimens
 - Three Months of daily Isoniazid plus Rifampin
 - Six or Nine Months of daily Isoniazid

Initial Evaluation:

- Chest x-ray
- CBC, Hepatic Function Panel, and an HIV test

Follow Up:

- In-person visits
 - All patients should be seen at one month after starting therapy to evaluate tolerance of treatment regimen

<u>Medications</u>	<u>Duration</u>	<u>Dose</u>	<u>Frequency</u>
Rifampin (RIF)	4 months	10mg/kg, max dose 600mg	Daily
Isoniazid (INH) + Rifapentine (RPT)	3 months	INH: 15 mg/kg, max dose 900mg RPT: Dosed by weight, >50.0 kg: 900 mg	Weekly
Isoniazid + Rifampin	3 months	INH: 5mg/kg, max dose 300mg. RIF: 10mg/kg, max dose 600mg	Daily
Isoniazid	9 months*	INH: 5mg/kg, max dose 300mg.	Daily

* 6 months is also a CDC recommended duration of isoniazid. It has been shown to have a higher rate of completion of therapy, although an increased risk of Tuberculosis reactivation.

- Patients on a 4 month regimen should have follow up at month 3 to ensure tolerance and evaluate for toxicity
- Lab monitoring
 - Routine hepatic function monitoring is not recommended in healthy individuals
 - Monthly hepatic function recommended when: history of liver disease, concern for alcohol use during LTBI treatment, concomitant use of other potential hepatotoxic drugs, pregnancy, abnormal baseline LFTs, or if any clinical hepatotoxicity concerns occur during therapy
 - Monthly CBC recommended for those on INH/RPT or RIF regimen, or if abnormalities noted on baseline CBC

References:

1. Sterling TR, Njie G, Zenner D, et al. Guidelines for the Treatment of Latent Tuberculosis Infection: Recommendations from the National Tuberculosis Controllers Association and CDC, 2020. *MMWR Recomm Rep* 2020;69(No.RR-1):1-11.
2. Heartland National TB Center and Mayo Clinic, 2020: *The Spectrum of Tuberculosis from Infection to Disease, TB at a Glance, 3rd Edition. Pages 23-36.*

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