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Latent Tuberculosis Infection (LTBI)

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Abstract

Latent tuberculosis infection (LTBI) is a persistent state of active immune response because of the presence of mycobacterial antigens without evidence of active tuberculosis (TB) disease). Children that are exposed to TB can get infected and develop the disease. Preventive therapy (PT) allows avoiding infection and disease. There is no gold standard to diagnose LTBI. We have two immunological based tests, in vivo and in vitro, based on the activation of T cell. Neither can differentiate between LTBI and active disease. There is no way to know if the infection has been cleared, contained or have a local infection.

Risk factors for progression to disease in infected patients are HIV infection, chronic kidney disease, glucocorticoid therapy, diabetes, severe underweight and others; but an important factor is the age at which the infection takes place: children under 4 years of age are at intermediate/ high risk. At least 4 different antibiotics are needed to treat TB disease, in order to avoid risk of resistance. For LTBI we only use 1 or 2 because the risk is almost non-existent. The drug used for more than 5 decades is isoniazid (INH) and reduces TB disease incidence between 60-90%. WHO has recommended the following regimens to treat LTBI: INH daily for 6-9 months, daily rifampicin (RFP) for 3-4 months, daily INH plus RFP for 3-4 months, and weekly rifapentine plus INH for 3 months (12 doses).The last one has shown non-inferioty versus 9 months of daily INH, less adverse effects and less discontinuation. The mentioned regimens are for sensible TB. Multidrug-resistant TB (MDRTB) patients take more time for sputum conversion so longer dissemination periods. Near 50% of close contacts of MDRTB patients develop LTBI. The usual standard of care is follow-up for 2 years and treatment if they present active disease. WHO has given recommendations for LTBI of MDRTB contacts: individualize cases searching for the intensity of exposure, certainty of source case, reliable information on the drug resistance pattern; confirmation of infection with tests; treatment selected according to the drug susceptibility profile of the source with preference for flurquinolones and close monitoring for 2 years.

Biography:

Carlos Jose Mendoza Fox is a Pediatric Pulmonologist from Lima, Peru. He works at a public hospital (Hospital Nacional Hipolito Unanue) in a high endemic tuberculosis part of Lima. He also is the pediatric pulmonologist at two private clinics (Clinica Anglo Americana and Clinica Ricardo Palma) in Lima. Investigator on pediatric tuberculosis. Member of the central committee of the National Pediatric Tuberculosis Network of Peru, International Congress on Pediatric Pulmonology and the American Thoracic Society.

Speaker Publications:

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