Latent tuberculosis

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India is having a number of public health problems[1]. Tuberculosis (TB) and HIV are some of the most common public health issues that need to be addressed and are the top two causes of the deaths due to infectious disease[1]. TB is caused by an airborne infection by the Mycobacterium tuberculosis[1-3]. Also, India is a high TB burden country with a very high number of morbidity and mortality due to TB[1,3,4]. Latent tuberculosis infection (LTBI) is a state of persistent immune response to stimulation by *Mycobacterium tuberculosis* antigens without evidence of clinically manifested active TB[5]. The presence of latent TB in India is well reported and experienced by clinicians[6]. The overall disease burden of active TB has put the LTBI in its shadow[6]. About 33% of the world's population is evaluated to have LTBI: they don't have active TB sickness yet may develop it in the close or remote future, a procedure called 'TB reactivation'[5]. The lifetime danger of reactivation for a man with LTBI is assessed to be 5–10%, with the dominant part getting TB inside the initial five years[5]. Besides, the danger is extensively higher in the presence of some other predisposing factor[5]. The clear guidelines are available for the management of active TB, but the same are lacking for the LTBI. The presence of positive Mantoux test, T-spot, or Q-gold, for diagnosis of LTBI, is still not conclusive[5,6]. In fact, there is no consensus of using all these tests on the same patient[6]. These tests have limitations since they cannot differentiate between latent infection with viable bacteria and healed/treated infections; besides, they also have poor predictive value[5].

The RNTCP guidelines clearly mention about the screening of high risk groups, but the same guidelines are lacking in cases where there is no clear history of TB contacts or in any other high risk groups[6]. The rampant private practice often leads to starting the antitubercular treatment (ATT) on the basis of Mantoux test or other similar aforementioned serodiagnostic tests, even in cases who have no clinical signs or symptoms of TB and thus resulting in a higher chance of the development of drug resistance in such patients[6]. Also, these treatments often leads to the development of side effects in the patients due to antitubercular drugs[7].

Besides, once diagnosed as latent TB there is no consensus on the management[6]. There are no large scale studies available to treat latent TB. Presently, the treatment may vary from the use of one or two drugs over a highly variable time duration[5-7]. Some studies have even advocated the use of certain drugs like Moxifloxacin which are commonly used in DR-TB cases[6]. The following regimens are recommended by WHO for the treatment of LTBI[5]:

- 6-month or 9-month Isoniazid daily,
- 3-month Rifapentine plus Isoniazid weekly,
- 3- or 4-month Isoniazid plus Rifampicin daily,
- 3– or 4-month Rifampicin alone daily

The TB in high burden countries is beyond complete eradication in near future[1]. The need of the hour is to decide about starting ATT based on a high index of suspicion only in strong prospective TB cases and in the high risk groups[7]. The TB control is possible only if all the stakeholders involved in the dissemination of awareness about TB work in unison, especially in resource-constrained settings with poor public health structure[8-21].

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