Letters to Editor

Latent tuberculosis

Sir,

We as clinicians should be aware of neglected group of tuberculosis (TB) patients referred to as latent TB. TB is widespread in our community, and load of active TB is much more as compared to developed nations. In developed nations, latent TB is being given due importance, but it is on back burner in our society. There are compelling factors which do not allow medical fraternity, administrators, or politicians for addressing issues related to latent TB in India.

The approach to management of TB whether active, smear positive, smear negative, or latent TB is different for low incidence areas as compared to high incidence area such as India where 40% of population has bacilli within them.[1] Some of these patients do proceed to active infection depending on various factors which lower their immunity. Although there is no recommendation to screen general population for latent TB, even if high risk groups such as immunocompromised, CKD, CLD, HIV, steroid intake for more than 4 weeks, immunosuppressants, TNF inhibitors, diabetes, and malignancy, are screened may scale to enormous numbers in a population of 1.3 billion. Are we all prepared for such a recommendation?

Improper selection of patients for the treatment of latent TB may lead to increase in mono or multi drug resistance to first line drugs being used for active TB. It will be apt to mention here that contacts of the active TB patients are at greater risk of having latent TB. As we are aware of Multi-drug-resistant TB in coming up in 4% of fresh cases and 18% in old treated cases, the number of active contacts will be proportionately be increased in India who obviously will have contracted resistant latent infection.[2] Does it qualify to make a new disease multi drug resistant latent TB? More important than that is what will be treatment modalities for such patients.

Even if we use T-spot, Q-gold, or Mantoux for diagnosis of latent TB, still we will not be sure about the presence or absence of bacilli.[3] At present, there is no consensus on the appropriate modality of treatment of latent TB. Some recommend single drug and some advocate two drug treatment for varying time periods. As data is coming up for 4 months short course treatment modalities which incorporate quinolones in management of active pulmonary TB, we might see quinolones such as moxifloxacin being efficacious in the management of latent TB.[4-7] It may have dual efficacy for those patients who have acquired resistant forms too.

Another issue at present is that there is no consensus on the appropriate modality of treatment of latent TB. Some recommend single drug and some advocate two drug treatment for varying time periods. As data is coming up for 4 months short course treatment modalities which incorporate quinolones in management of active pulmonary TB, we might see quinolones such as moxifloxacin being efficacious in the management of latent TB.[4-7] It may have dual efficacy for those patients who have acquired resistant forms too.

The following categorization of patients will enable clinicians to prioritize screening for latent TB.

Group A: These patients need to be screened necessarily:
- Close contacts of patients with sputum positive TB
- Health facility workers, geriatric centers, remand homes, and military barracks
- Occasional contact with patients of high disease burden of contagious active TB
- Laboratory exposure
- Drug abuse.

Group B: High risk patients:
- HIV
- Posttransplant, chemotherapy, radiation, or tumor necrosis factor (TNF)–alpha inhibitors
- Leukemia or lymphoma
- Chronic kidney disease (CKD)
- Chronic lung disease (CLD)
- Silicosis.

Group C: Moderate risk:
- Diabetes mellitus
- Steroid intake.

Group C: Low risk:
- Underweight body mass index <20
- Cigarette smoker
- Abnormal chest X-ray.

Caveat:
- The close contacts who are severely immunocompromised need latent therapy despite negative tuberculosis skin test (TST) or interferon-gamma release assays
- Nontuberculous mycobacterium or recently bacille calmette–guérin (BCG) vaccination may lead to false positive TST, and may not merit for treatment as latent TB
- Repeat Mantoux after 12–14 weeks in close contacts of low risk group who test positive.

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seen as a nonmorbid or a comorbid condition which needs to have high motivation levels to take drugs from 6 to 9 months. These drugs are toxic, and most of comorbid patients are already taking other medicines which may increase noncompliance or increase the toxicity.

A word of caution needs to be addressed to us as clinicians that Mantoux positivity should be interpreted with caution. We have seen in past the misuse of serodiagnostic tests in the management of TB, which ultimately got banned by legislation.

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**REFERENCES**

1. Global Tuberculosis Control 2014. Geneva: WHO; 2014. Available from: http://www.who.int/tb/publication/globalreport/en. [Last accessed on 2015 Dec 16].
2. A World Atlas of BCG Vaccination Policies and Practices. Available from: http://www.bcgatlas.org. [Last accessed on 2015 Dec 16].
3. Mazurek GH, Jereb J, Lobue P, Iademarco MF, Metchock B, Vernon A; Division of Tuberculosis Elimination, et al. Guidelines for using the QuantiFERON-TB Gold test for detecting *Mycobacterium tuberculosis* infection, United States. MMWR Recomm Rep 2005;54:49-55.
4. Updated recommendation of interferon gamma release assays for latent tuberculosis infection: An advisory committee statement. Canadian Tuberculosis Committee. Can Commun Dis Rep 2008;34(ACS-6):1-13.
5. Merle CS, Fielding K, Sow OB, Gninafon M, Lo MB, Athiyan T, et al. A four-month gatifloxacin-containing regimen for treating tuberculosis. N Engl J Med 2014;371:1588-98.
6. Jindani A, Harrison TS, Nunn AJ, Phillips PP, Churchyard GJ, Charalambous S, et al. High-dose rifapentine with moxifloxacin for pulmonary tuberculosis. N Engl J Med 2014;371:1599-608.
7. Gillespie SH, Crook AM, McHugh TD, Mendel CM, Meredith SK, Murray SR, et al. Four-month moxifloxacin-based regimens for drug-sensitive tuberculosis. N Engl J Med 2014;371:1577-87.

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