

The Monster Tuberculosis in India, Impending Epidemic in COVID-19 Era

Rahul Garg¹ Alkesh Kumar Khurana² Sagar Khadanga¹

¹Section of Infectious Diseases, Department of General Medicine, All India Institute of Medical Sciences Bhopal, Bhopal, Madhya Pradesh, India

²Department of Pulmonary Medicine & TB, All India Institute of Medical Sciences Bhopal, Bhopal, Madhya Pradesh, India

Address for correspondence Sagar Khadanga, MD, Section of Infectious Diseases, Department of General Medicine, All India Institute of Medical Sciences, Bhopal, 462020, Madhya Pradesh, India (e-mail: drsagarkhadanga@gmail.com).

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The World Health Organization (WHO) estimated 10 million tuberculosis (TB) cases with 1.6 million TB-related deaths worldwide in 2019. WHO also identifies India harboring approximately 26% of the global TB cases.¹ Eliminating TB worldwide is undoubtedly dependent on India. Identifying this concern, the Prime Minister of India launched the “National Tuberculosis Elimination Program (NTEP)” to eliminate TB in the country by 2025.

The ongoing COVID-19 pandemic with new variants of concern and interests caused by the severe acute respiratory syndrome coronavirus 2 has thrown the world into disarray, with over 170 million people reportedly infected nearly 4 million deaths globally.² As the COVID-19 pandemic worsened in 2020–21, the already weakened global TB campaign worsened considerably, and the low- and medium-income countries, including India, are the worst hit.³ The prevalence of TB among COVID-19 patients is 0.37 to 4.47% in different studies.⁴ However, we believe that this is an understatement and the true prevalence is often beyond imagination. Our assumption is based on the following observations.

Lockdown and Hampered Health Care Delivery

The first ever lockdown in India included a nationwide lockdown for 68 days starting from March 25, 2020, with a phase-wise unlocking over several months thereafter. Before the health care delivery system could regain its normalcy, the second wave was hit in March–April 2021 and was more challenging than before. Though there was no nationwide

lockdown this time, almost all the states were locked down for about 2 months and gradually opened.

During the lockdown, the priorities shifted completely toward COVID-19, with a highly adverse impact on TB. As a result, in the first phase of lockdown over the initial 8 weeks, there was a 59% decrease in TB case detection compared with case detection 8 weeks prior.⁵ The reduction in new case detection and diagnosis could be due to restricted movement, fear of traveling to health care facilities, inability to avail non-COVID-related services, and deployment of human resources entirely to combat COVID-19. A modeling analysis by the Stop TB Partnership group shows that each month of lockdown in India would cause an additional 40,000 deaths over the next 5 years.⁶ If the projections are correct, it is hard to imagine the would-be erupting TB cases in the country.

Coinfection and Reactivation of Tuberculosis

COVID-19 and TB share common social predispositions, likely overcrowding, have a similar transmission mode like droplet infection, and share similar risk factors such as advanced age, diabetes, malnutrition, immunosuppression, and other chronic respiratory illnesses. Both the diseases present commonly with fever, cough, and shortness of breath. Although TB has more chronic presentation, COVID-19, like acute presentation, is also seen. As TB is endemic in India, it is no brainer to think that many patients infected with COVID-19 must be having latent TB or even active TB. The complex interplay of dysregulated cell-mediated immunity in COVID-19 and subsequent steroids as the mainstay of treatment in COVID-19 pneumonia makes the patient in a transient immunosuppressive state.

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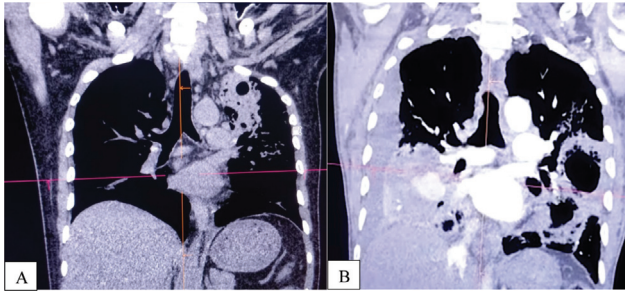


Fig. 1 (A) Area of consolidation with intracavitary changes in left upper lobe. (B) Thick walled cavitary lesions in left lower lobe with extensive area of consolidation in right lower lobe.

If the patient has uncontrolled diabetes, it makes the milieu a perfect environment for reactivation of latent TB. The age-old clinical practice of suspecting TB in any patient with fever and cough for more than 2 weeks seems no more relevant in the COVID-19 era. In view of the rampant use of broad-spectrum antibiotics (some of them have antitubercular property) and steroids, the patient might not have a fever and may have atypical presentations like the two cases (→**Fig. 1**) as described. These two patients in their early fifties were referred to our tertiary care COVID-19 center with persistent dry cough and hypoxia beyond a month of initial diagnosis of COVID-19. A careful history, examination, and laboratory workup established the diagnosis of CBNAAT positive (Truenat MTB Molbio Diagnostics, India), rifampicin-sensitive pulmonary TB, although sputum was negative for acid-fast bacilli in microscopy.

In conclusion, we would urge all the clinicians to be more suspicious of TB rather than attributing all respiratory complaints as COVID sequel or pulmonary mucormycosis. At the same time, all possible efforts are to be made functional in a war footing style for preventative, diagnostic, and therapeutic management of TB. Let us be wise to combat this would-be public health emergency and the emergence of multi-drug-resistant TB, especially in diabetic patients.

Conflict of Interest

None declared.

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