

# COVID-19: Avoiding a second tragedy in a tuberculosis burdened country

Siddharth Raj Yadav, Rohit Kumar, Amit Kumar, Pranav Ish, Nitesh Gupta, Shibdas Chakrabarti

Department of Pulmonary, Critical Care and Sleep Medicine, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi, India

## To the Editor

Novel Coronavirus disease (COVID-19) was first notified in December 2019 from Wuhan, China. Now, it has spread rapidly and has been declared a pandemic affecting over 200 countries with widespread morbidity and mortality [1]. It has been postulated that the most vulnerable population are the elderly, people living in crowded areas, children and immunocompromised individuals, such as people living with human immunodeficiency virus (HIV). The correlation of tuberculosis (TB), HIV and malnutrition are well documented and hence, people with tuberculosis should be considered as special population in this pandemic. TB is an ancient disease among humans recorded as far back as seventy thousand years which was declared a global public health emergency in 1993 by the World Health Organisation (WHO) [2]. India has the highest TB burden in the world.

Correspondence: Rohit Kumar, Department of Pulmonary, Critical Care and Sleep Medicine, Vardhman Mahavir Medical College and Safdarjung Hospital, New Delhi 110029, India.  
E-mail: dr.rohitkumar@mail.com

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Abbreviations: COVID- 19 Novel corona virus 2019, TB- tuberculosis, WHO world health organization, BCG- Bacillus Calmette–Guérin vaccine, SARS-CoV-2- “severe acute respiratory syndrome coronavirus 2

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In a recent observational case-control study done in China in Shenyang Chest Hospital, TB was found to be an important risk factor for COVID-19 infection. Symptom development and progression were more rapid and severe in cases of latent and active TB patients [3]. Taking this as reference and looking at high TB burden countries like India, this could be a catastrophe in waiting considering the highly burdened health care systems, poor doctor to patient ratio (1 doctor for 1457 persons) and the disproportionately low number of Intensive Care Unit (ICU) bed availability in both, private as well as public, hospitals[4].

Overlap of both the pandemics COVID-19 and TB may have pestilential effect on the community health and can lead to sustained chain of transmission in community [5]. Both COVID-19 and TB are transmitted mainly via close contacts, attack primarily the lungs and have similar symptoms such as cough, fever and difficulty breathing (Table 1).

It has been observed globally that whenever a new pandemic or epidemic strikes, all health care facilities are directed towards it due to the sudden surge in demand for care. In the case of COVID-19 also, special wards, departments and even special COVID-19 hospitals have been designated. Doctors and health care workers are posted or shifted from their speciality departments to a new role in the pandemic situation. The focus tends to become narrow and other diseases are neglected [6]. TB is a “silent” epidemic and as soon as it drops off the radar, the effects can be catastrophic on its epidemiology and the consequent public spending. The New York epidemic of early 1990 is a grim reminder of this situation when New York city accounted for more than 15% of the total cases in America and government needed to spend more than 1\$ billion to contain the MDR-TB outbreak [7].

The countries with high TB burden such as India, where well-structured programs are running and have a very good infrastructure till grass root level, can utilize this infrastructure in providing appropriate care during the COVID-19 pandemic. This includes awareness generation about the disease, the spread, social distancing and mask use with the help of TB workers available at each directly observed treatment short course chemotherapy (DOTS) centre. The public has to be sensitised and counselled for wearing face masks. This is extremely relevant as blocking the spread of the disease, especially acute infections like COVID-19, is a more effective measure than combating after mass spread [8,9]. DOTS centres could be converted to COVID-19 mass screening centres where the already installed GeneXpert® testing machines can use the Xpress SARS-CoV-2 cartridge for rapid diagnosis of COVID-19, if it is cleared for use by the WHO. TB hospitals and sanatoria could be used for quarantining presumptive cases. Triage, cough practices and etiquettes, contact tracing and isolation are already established for TB and can be similarly used for COVID-19. The doctors working in these hospitals are usually respiratory physi-

**Table 1. Tuberculosis and COVID-19. The need for joint efforts.**

Differences	Covid 19	TB
Incubation period	One to two weeks	Typically longer period (months)
Symptoms		
• Cough	Dry	Productive blood tinged
• Shortness of breath	Early after onset	Later stage
• Fever	High grade (mostly)	Low grade
• Weight loss	Absent	Present
• Night sweats	Absent	Present
Resource mobilisation	Rapid	Slow
Burden on health care services	Acute (5)	Chronic
Drug for cure	Not available (6)	Available
Vaccine available	Not available in development phase	Yes (BCG), but of limited efficacy

Then why combine work forces for both?

Similarities	Covid-19	Tb
Spread	Droplet, fomites, possibly aerosols (5,6)	Droplet and aerosols
Economic burden	Huge	Huge
Morbidity	High	High
Prevention and control of spread	May be high	Possible
Stigma and need for public awareness	Yes	Yes
Need for contact tracing and isolation	Yes	Yes
Need of research for treatment and prevention	Yes	Yes
Global importance and need for national and international policies	Yes	Yes

COVID-19, novel coronavirus 2019 disease; TB, tuberculosis; BCG, Bacillus Calmette-Guérin vaccine.

cians who are already well versed with working in isolation wards as in the case of multi drug resistant tuberculosis (MDR- TB) wards. A recent data of 49 patients across various countries has shown that COVID-19 can occur before, during or even after TB, stressing on the importance of monitoring all these patients for COVID-19 symptoms which again can be done by the same team of doctors [10]. An expanded cohort has also found that these co-infections can contribute to increased morbidity and mortality [11].

The combined focus on both the diseases can help in achieving control by a judicious utilisation of health care workers and resources. The most important point to remember is that the novel Corona virus pandemic is on the rise but the silent epidemic of other disease such as TB/MDR- TB are also continuing and these too should be given due attention and all services for them should be kept functional. This will help us to avoid an already grieving country due to COVID 19 from another wave of TB.

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