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Short Communication

COVID-19 Pandemic Induced Health Risk of People Inflicted with Tuberculosis in India

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Abstract

India was dealing with tuberculosis (TB) epidemic even before the advent of SARS Cov-2 in March 2020. The COVID-19 onslaught observably engrossed the public healthcare infrastructure in pandemic induced exigencies resulting TB patients deprived of essential treatment. This paper aims to highlight the potential health risks faced by TB Patients during the largest lockdown and suggests advancement of patients' support activities by developing systems for decentralizing drug dispensing, patient support activities, health promotion, tele-consultation and staff management in response to negative situation, and consider its positive aspects that should be acknowledged and included in the advocacy agenda for overall TB service enhancement.

Keywords: COVID-19; Lockdown; Tuberculosis; Health-risk; Advocacy

Even before COVID-19 became a global pandemic, India was dealing with another, much older epidemic-tuberculosis (TB). TB affected 2.64 million Indians in 2019 and killed nearly 450 000 people in the country. That is over 1000 TB deaths every single day, well before COVID-19 entered the picture. In fact, no country has a higher TB burden than India, which accounts for a quarter of the 10 million global TB cases and 1.4 million TB deaths each year [1]. But with COVID-19 onslaught, the public healthcare infrastructure reportedly engrossed in the care of the novel coronavirus disease patients. Health activists alleged that those experiencing other significant illness, especially tuberculosis (TB), are being denied of essential treatment at this point. India has witnessed disruption of TB and general health services. The official data on the extent of health service disruptions have been harder to come by. The National Health Mission's Health Management Information System (NHM-HMIS) [2], got uploaded in late August, data for April, May and June finally became available, and it laid bare a worrying disruption of all health services. In particular, the data show serious disruption in access to the prevention, monitoring and treatment of TB, India's biggest infectious disease killer- notwithstanding the Government's commitment to end TB by 2025. The Government released guidelines to states on March 25 [3], to the effect that National TB Elimination Programme should continue to be fully operational in the interest of TB patients and states should take necessary steps notwithstanding of the COVID-19 situation and restrictions imposed. In spite of the same, patients on the ground seemed to face difficulty in accessing TB services, as more and more medical personnel were engaged to COVID-19 emergencies. Media Reports indicated that private clinics and OPD services were shut and fresh case detections of TB have nearly halted. The lockdown also compounded problems for existing patients on treatment, as they were reportedly faced delays in receiving their drug susceptibility testing (DST) reports. While the public health system collapsed under the stress of the growing COVID-19 caseload, the

private healthcare system became expensive and challenging to access [4]. In both sectors, non-Covid-19 conditions are getting little attention [5,6]. The 'Nikshay' portal of Central Government reviewed in June end 2019 [7] indicated that whole range of cases notified monthly lessened drastically throughout the lockdown period. For example, 45,738 TB cases were notified in Uttar Pradesh in February 2019- however they came down to 28,898 in March 2020 and subsequently to 9,827 in the following month of April, but then case notification gradually shot up to 14,033 in May 2020. TB notification in the said portal further designated that during March and June 2019, the public sector notified 615,264 TB cases and the private sector notified 245,523 cases. In contrast, in 2020 corresponding months, the public sector notification came down to 350,261 TB cases and the private sector notification stood as 114,790. Media reviews indicated that the TB case notifications throughout India have been dropped via way of means of over 25% in March [8], with an expected 3,00,000 lost case notifications till May 30, 2020. This had been worrisome, as the abrupt drop in notification could not only lead to an increase in the transmission of the disease as patients deprived of medical care and they may continue to spread the disease, experts warned and added that this would also exacerbate outcomes at a later stage and even accelerate discontinuation of the long TB treatment cycle. Notably, the National survey for state-wise prevalence of microbiologically confirmed pulmonary tuberculosis in the country, that began during the first quarter of last year by the National Institutes under Indian Council of Medical Research, got halted due to Covid-19 outbreak. The project's infrastructure was subsequently used at different states for the purpose of Siro-survey by ICMR for Covid-19 in sampled districts [9].

Tuberculosis (TB) is, as of now, existing as remarkable pandemic worldwide more than quite a while. It was at that point pronounced a worldwide health crisis by the WHO in 1993. The assessed burden of TB world-wide is 10 million, with nearly 50% of them having drug resistance TB in 2018. Nearly 3 million (30%), of the 10 million cases, live undiagnosed. In comparison to the radical COVID-19, TB remains the deadliest infectious killer. Studies estimated that mortality turned into 1.2 million among HIV non-reactive people in 2018, and an additional 0.25 million HIV reactive cases [10]. In spite of TB being preventable and curable, nearly 4 thousand people die and around 30 thousand people fall ill with the infection every day. Data tracked indicated 3 out 10 TB patients (27%) in the world belong to India, and around 1400 people die and 7500 people fall ill with infection each day in India due to tuberculosis. States as Uttar Pradesh, Bihar, Odisha, West Bengal and Rajasthan are home to 39% of registered tuberculosis patients [11] - a high-risk category for contracting Covid-19. There is an important association among TB and COVID-19 - both are transmitted via breathing droplets and have an effect on lungs. Seriously ill patients of the two diseases need ventilators. The two of them can be recognized utilizing the equivalent symptomatic technology/machines. Despite the fact that evidence on Covid-19 infection in TB patients is minimal, it is predicted that people who have both TB and Covid-19 would have worse treatment outcomes, particularly if their TB treatment is interrupted.

The World Health Organization modelling study published in May 2020, indicated a 25% decrease in TB detection due to COVID-19 pandemic in quarter of an year could result in a 13% increase in TB deaths [12]. A study conducted in China (based on 10 cases), estimated a prevalence of TB in COVID-19 patients of 0.5% to 4.5%. Similarly, another experiment in Western Cape in South Africa showed that both current and previous TB were associated with COVID-19 deaths with an adjusted hazard ratio of 2.70 and 1.51, respectively. A modelling study from the Philippines showed that the risk of death in COVID-19 patients with TB was 2.17 times higher than in non-TB patients, and that the likelihood of recovery was 25% less with a longer time to recovery [13].

It has been assessed that somewhere in the range of 2020 and 2025, an extra 1.4 million TB deaths could be recorded as an immediate outcome of the COVID-19 pandemic. The COVID-19 response group investigation at the Imperial College, London in May 2020 indicated that interruptions in offerings for treatment of HIV, TB and malaria in high burden low-and middle-income international locations ought to prompt greater death toll [14]. In this manner, the postponement in identifying new cases makes a hazard, as the patient is likely to transmit the infection among family members during the period. Also, the likelihood danger of complications and death would be paramount. Regardless of whether the patient has the choice to go to a healthcare facility, affirming the diagnosis would require significant investment, as the facilities have been redirected to COVID-19. The computerized CBNAT tests that were created for TB diagnosis have been altered to recognize COVID-19 and numerous more machines have been redirected. Once patients begin getting treatment, pandemic induced restrictions would made it troublesome for community workers to visit the pa-

tient and guarantee adherence to treatment and monitor progress. Health specialist asserted that TB diminishes physical resistance and patients ended up vulnerable to a host of diseases. It is dreaded that COVID-19 may be one such malady that seem to connect a TB patient and result in poorer treatment outcomes.

At this crossroads, the way forward is to embrace all measures taken to guarantee progression of service delivery for people who require preventive and healing treatment for tuberculosis. Public Health Experts opine that both patients and healthcare framework, ought to discuss and investigate ways to play down superfluous visits to healthcare centers by way of centering on the essential care level to decrease the dangers of extreme intense respiratory syndrome SARS Cov-2 exposure during clinic attendance, whereas prioritizing the arrangements uninterrupted TB treatment. For drug sensitive or DS-TB patients, beginning treatment who are generally well, adequate intensive phase TB treatment ought to be given with the goal that patients just come back to the health facility for clinical assessment and to change to the continuation phase. When clinically appropriate, 4-month continuous phase treatment for TB should be administered. MDR-TB patients must report refills to comply with scheduled clinical visits at the healthcare facility (weeks 2, 4, and 8, and from 2 months to 1 month from that point). Health center staff should call all patients with clinically significant myelosuppression and either change treatment or monitor at least monthly while they are being treated with linezolid. After 2 months, irrespective of MDR-TB regimen, patients should receive 2-monthly treatment refills and clinical consultations and monitoring. Consultation at the Clinic for patients at Week 8, Month 4 and Month 6 are especially critical to evaluate treatment adequacy, sputum culture result follow up, make treatment adjustments and screen patients receiving QT-prolonging drugs [15]. Health experts stated that all unwell patients should be guided to first contact the health facility over telephone, including those with TB. They should go to the health facility whenever necessary to get guidance on infection prevention and COVID-19 screening strategies. Along with these, decentralizing drug dispensing (with the exception of treatment procedures of multi-drug resistant tuberculosis that is provided intravenously twice per day by community nurses conducting home visits with appropriate personal protective equipment); patient support activities, health promotion, tele-consultation and staff management required in right earnest. Despite the fact that these changes are responses to a negative situation, positive aspects should be acknowledged and included in the advocacy agenda for overall TB service enhancement. People -communities, public health officials, and policy makers- can learn from each other and recognize the connection between infectious disease and poverty as a result of increased investment in their control, resulting in systemic social improvements that benefit all.

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