Co-Infection Tuberculosis/Covid 19. An Announced Tragedy?

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MRS, 32, male, homeless, illicit drug user, smoker, alcoholic, with no family bonds, was admitted to the Nestor Goulart Reis Hospital, a São Paulo State Health Secretary reference centre, to treat multi/extensively resistant tuberculosis, on April 6, 2020, upon diagnosis with bacterial pneumonia and pulmonary tuberculosis (TB). An outpatient rapid molecular sputum test (RMT) performed on March 20, 2020 revealed positivity for M. tuberculosis with rifampicin resistance (R). The therapy established at the time was capreomycin (CM), ethambutol (E), levofloxacin (LvX), pyrazinamide (P), and terizidone (Tzd). After hospitalisation, his general condition progressively decreased. A reverse-transcriptase polymerase chain reaction (RT-PCR) on April 9, 2020 was positive for SARS-CoV-2. The patient developed viral bronchopneumonia, bacterial pneumonia, septic shock with pulmonary focus, and respiratory and renal failure. He required orotracheal intubation, tracheostomy, and mechanical ventilation in the prone position. Anti-tuberculosis and antimicrobial therapy was maintained. The patient remains hospitalised for tuberculosis treatment. TB is the largest cause of death due to a single infectious agent, accounting for 1.5 million deaths in 2018 and approximately 4,000 deaths per day. Similar to SARS-CoV-2, TB undergoes direct airborne transmission and is considered a social disease. Its incidence increases or decreases according to socioeconomic and/or social protection measures. Risk factors such as older age, malnutrition, diabetes, agglomeration, social vulnerability, and signs and symptoms such as cough, fever, asthenia, and myalgia are common to both pathologies and may confound and/or delay the diagnosis of COVID/TB co-infections, thus increasing virus and/or bacillus dissemination. The patient had risk factors for both infections, besides structural pulmonary parenchyma involvement (X-ray), which may explain the viral infection severity, progression to Severe Acute Respiratory Syndrome, and need for mechanical ventilation Brazil is the ninth largest economy in the world. Meanwhile, 20% of the population remains in poverty. It is estimated that 12 million people live agglomerated in communities (shanty towns) without basic sanitation. This combination of factors may facilitate COVID-19/TB co-infection and increase the number of TB cases and deaths. In summary, health services, including those that diagnose and treat TB and lung diseases, may receive patients with COVID-19, many of whom have not been previously diagnosed. The consequences of co-infection are remaining unexplored. Patients will need close follow-up to assess possible late respiratory and systemic repercussions. Furthermore, effective public power and health system actions will be necessary for the most vulnerable populations to avoid cases as serious as the one presented here.