



## Tuberculosis Series 2021

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This issue of the *Jornal Brasileiro de Pneumologia* (JBP) is dedicated to World Tuberculosis Day, which is celebrated every year on March 24. In 2015, tuberculosis surpassed HIV infection to become the leading cause of death from infectious disease worldwide. In 2019, 73,864 new tuberculosis cases were reported in Brazil (incidence of 35.0 cases/100,000 population). In 2018, 4,490 tuberculosis-related deaths were reported (2.2 deaths/100,000 population).<sup>(1)</sup> The lead article in the current issue of the JBP is the new consensus statement from the Brazilian Thoracic Association on the diagnosis of tuberculosis, based on the latest recommendations on the topic.<sup>(2)</sup>

Since the beginning of the COVID-19 pandemic, various cases of the tuberculosis-COVID-19 combination have been reported, increasing the already high potential for morbidity and mortality of each disease.<sup>(3-5)</sup> In this issue of the JBP, a review article<sup>(6)</sup> provides an overview of that combination, focusing on the differences between Brazil and Europe.

With regard to the epidemiology of tuberculosis in Brazil, the issue contains one ecological study<sup>(7)</sup> in which data on the prevalence and incidence of the disease, as well as on the associated mortality, were assessed for the various regions of the country. The authors of the study demonstrated that, although all of those indicators decreased slightly from 2006 to 2015, Brazil failed to reach the United Nations Millennium Development Goals target of reducing tuberculosis-related mortality by 50%. The authors suggested that regional differences were responsible for that failure and that this must be taken into account in the development of tuberculosis control measures in the country.

In this same issue, there are three articles on the diagnosis of tuberculosis: one regarding the quantification of adenosine deaminase to diagnose tuberculous pleural effusion in children<sup>(8)</sup>; and two related to the Xpert MTB/RIF test.<sup>(9,10)</sup> Pagano et al.<sup>(9)</sup> described the association between Xpert MTB/RIF cycle threshold ( $C_T$ ) values and sputum smear microscopy findings in patients

with pulmonary tuberculosis; a  $C_T$  cutoff value of 22.7 showed good predictive value for smear microscopy positivity, that being the first study in Brazil to assess the accuracy of  $C_T$  values as a measure of bacillary burden. Brito et al.<sup>(10)</sup> demonstrated that, in BAL fluid samples from patients under clinical suspicion of having pulmonary tuberculosis who have tested negative for AFB in sputum samples or those with scarce sputum production, the diagnostic performance of Xpert MTB/RIF is superior to that of smear microscopy.

This issue also contains a brief communication on tuberculosis treatment, in which Santos et al.<sup>(11)</sup> analyze and compare tuberculosis treatment outcomes between the homeless population and the general population in Brazil. Although there were differences among the Brazilian regions, all indicators were worse in the homeless population. The rates of loss to follow-up and mortality were, respectively, 2.9 and 2.5 times higher in the homeless population than in the general population. In addition, the rate of treatment success was approximately 50% lower in the former.

In another article included in this issue, Inoue et al.<sup>(12)</sup> describe the effects that advanced extrapulmonary solid cancer has on the progression of *Mycobacterium avium* complex lung disease. The authors retrospectively evaluated 286 patients and demonstrated that the median time to progression of *M. avium* complex lung disease was shorter in patients with coexisting advanced solid cancer. In addition, although indirectly related to *Mycobacterium tuberculosis* and nontuberculous mycobacteria, one letter to the editor reports a case of giant Rasmussen's aneurysm,<sup>(13)</sup> and one suggests a new pathophysiological theory for Lady Windermere syndrome.<sup>(14)</sup>

In summary, this tuberculosis series features several articles focusing on diverse aspects of the disease, highlighting the challenges faced in tuberculosis control, especially during the COVID-19 pandemic, and providing a comprehensive overview of some of the latest research in the field.

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