J Bras Pneumol. 2018;44(5):434-435
http://dx.doi.org/10.1590/S1806-37562018000000193

Clinical aspects of the Mycobacterium abscessus complex

Beuy Joob[1,a], Viroj Wiwanitkit[2,b]

DEAR EDITOR:

The study by Monteiro et al.[1] on clinical aspects in patients with pulmonary infection caused by mycobacteria of the *Mycobacterium abscessus* complex (MABSC) in the Brazilian Amazon is very interesting. The authors concluded that the "treatment response of pulmonary disease caused by MABSC was less favorable than that of pulmonary disease caused by other nontuberculous mycobacteria." We would like to share ideas on this observation. In our setting, Indochina, the similar high prevalence of mycobacterium pulmonary infection is also observed. MABSC complex has become a new interesting emerging infection. The poor response to the standard anti-mycobacterial therapy is also observable.[2,3] The failure of treatment is usually related to late diagnosis and previous antibiotic treatment due to the lack of standard microbiological testing to confirm the specificity of the pathogen. This situation seems to be similar to that reported by Monteiro et al.[1]; most of the patients receive antibiotic treatment before having the final diagnosis of MABSC. In addition, the availability of drugs of choice against MABSC (such as imipenem) is limited in large tertiary hospitals that cannot correspond to the increased incidence of the problem in a community hospital. The possible new paradigm against the emergence of MABSC might be the early diagnosis by specific confirmation of mycobacterial isolates and financial support for the availability of highly effective antibiotic treatment in community hospitals.

REFERENCES

1. Monteiro JTC, Lima KVB, Barretto AR, Furlaneto IP, Gonçalves GM, Costa ARFD, et al. Clinical aspects in patients with pulmonary infection caused by mycobacteria of the Mycobacterium abscessus complex, in the Brazilian Amazon. J Bras Pneumol. 2018;44(2):93-98. https://doi.org/10.1590/s1806-37562016000000378
2. Phowthongkum P, Prasanthai V, Udomsantisook N, Suankratay C. Rapidly growing mycobacteria in King Chulalongkorn Memorial Hospital and review of the literature in Thailand. J Med Assoc Thai. 2005;88(8):1153-62.
3. Sungkanuparph S, Sathapatayavongs B, Pracharktam R. Infections with rapidly growing mycobacteria: report of 20 cases. Int J Infect Dis. 2003;7(3):198-205. https://doi.org/10.1016/S1201-9712(03)90052-X

1. Sanitation 1 Medical Academic Center, Bangkok, Thailand.
2. D.Y. Patil University, Pune, India.
a. http://orcid.org/0000-0002-5281-0369; b. http://orcid.org/0000-0003-1039-3728

ISSN 1806-3713

Authors' reply

José Tadeu Colares Monteiro[1,a]

Initially, on behalf of our team, I would like to thank the authors for their correspondence, aimed at the exchange of ideas about a complex clinical condition. The challenge of treating respiratory infection with mycobacteria of the *Mycobacterium abscessus* complex is established from the outset, either by the difficulty of isolating and identifying the bacteria, or by the fact that the patients are critically ill, typically developing structural lung changes prior to becoming ill.[1]

Respiratory infections caused by nontuberculous mycobacteria (NTM) represent an emerging public health problem. In a survey conducted in Germany in 2017 and involving patients with health insurance, the rate of hospitalization was three times higher among those infected with NTM than among controls matched for age, gender, and the Charlson comorbidity index, such hospitalizations accounting for 63% of total costs.[2]

In Brazil, access to centers that perform genotype identification remains limited, as does access to sensitivity testing, constituting an impasse in the clinical approach to patients with respiratory infection caused by NTM. According to the 2017 guidelines of the British Thoracic Society, when *M. abscessus* is isolated, sensitivity tests should be performed, those tests including at least three antibiotics (clarithromycin, cefoxitin, and amikacin), as well as (ideally) tigecycline, imipenem, minocycline, doxycycline, moxifloxacin, linezolid, cotrimoxazole, and clofazimine.[3]

The abovementioned wide variety of drugs compose the therapeutic arsenal available for use, which is nevertheless of limited efficacy because of the bacterial resistance of the *M. abscessus* complex, mainly to macrolides and aminoglycosides. This excessive number of drugs creates barriers to a satisfactory clinical outcome,[1] the main barriers being the prolonged duration of treatment, which makes adherence difficult; the high incidence of adverse effects; the long hospital stay (due to parenteral administration of drugs); and the high economic cost.

Considering that respiratory infections caused by the *M. abscessus* complex are far from being under control in many countries, the exchange of information is always of great value, increasing knowledge and building a body of scientific evidence regarding such infections.

REFERENCES

1. Monteiro JTC, Lima KVB, Barretto AR, Furlaneto IP, Gonçalves GM, Costa ARFD, et al. Clinical aspects in patients with pulmonary infection caused by mycobacteria of the Mycobacterium abscessus complex, in the Brazilian Amazon. J Bras Pneumol. 2018;44(2):93-98. https://doi.org/10.1590/s1806-37562016000000378
2. Diel R, Jacob J, Lampenius N, Loebinger M, Nienhaus A, Rabe KF, et al. Burden of non-tuberculous mycobacterial pulmonary disease in Germany. Eur Respir J. 2017 Apr 26;49(4). pii: 1602109. https://doi.org/10.1183/13993003.02109-2016
3. Haworth CS, Banks J, Capstick T, Fisher AJ, Gorsuch T, Laurenson IF, et al. British Thoracic Society guidelines for the management of non-tuberculous mycobacterial pulmonary disease (NTM-PD). Thorax. 2017;72(Suppl 2):ii1-ii64. https://doi.org/10.1136/thoraxjnl-2017-210927

1. Programa de Pós-Graduação em Biologia Parasitária na Amazônia, Centro Universitário do Estado do Pará, Universidade do Estado do Pará, Belém, PA, Brasil.
a. http://orcid.org/0000-0002-7359-5178