A fatal case of pulmonary infection by *Mycobacterium colombiense* in Para State, Amazon Region, Brazil

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**Abstract**

*Mycobacterium avium* complex (MAC) is a heterogeneous group of species found in several environmental sources and that exhibit variable degrees of pathogenicity. Among the MAC members, *Mycobacterium colombiense* has been related to pulmonary disease and disseminated infection in HIV-infected patients in Colombia. Lymphadenopathy cases have also been reported. We have described a fatal case of *M. colombiense* pulmonary disease in a Brazilian patient without evidence of HIV infection or other known causes of immunosuppression.

In February 2012, the patient was admitted to hospital presenting fever, productive cough, sputum containing mucus and pus, astheny, accentuated weakness, dyspnea, digital clubbing, thoracic pain, hemoptoic episodes, and hemoptysis. His HIV tests were all negative. On the chest x-ray, cavitations were found in the right upper lobe (RUL), right middle lobe (RML), and right lower lobe (RLL) (Fig. 2A). The most important findings on the high-resolution computed tomographic (CT) examination were the presence of cavitations in the RUL, RML, RLL, and left upper lobe, bilateral bronchiectasis, lung nodules (some calcification), centrilobular nodules, pleural thickening, and pleural calcifications (Fig. 2B).

Antimicrobial therapy started after 2 positive sputum culture results, meeting microbiological criteria for pulmonary NTM disease. Treatment was based on administration of rifampcin, ethambutol, clarithromycin, and streptomycin. Nevertheless, streptomycin was interrupted and replaced by amikacin because the patient referred dizziness complaints, knowingly related to the use of that drug. The patient remained with AFB smear-positive sputum and had no improvement following treatment. After the third month, we had no contact with the patient, and then we were informed that he evolved to death in his city. According to the death certificate, the “causa mortis” was unspecific pneumonia.

Evaluation of antimicrobial susceptibility was performed using broth microdilution with Sensititre SLOWMYCO plates (TREK Diagnostic Systems, Cleveland, OH, USA) according to the manufacturer’s instructions. Briefly, the plates were inoculated with a suspension adjusted to 0.5 McFarland standard of 3 *M. colombiense* isolates, and antimicrobial susceptibility was determined by MIC...