TITLE: Species distribution of nontuberculous mycobacteria from lung infection in Rondônia State, from 2008 to 2016

AUTHORS: Liziane Rolim Dantas[1], Jenifer Luana Almeida Felipe[1], Anderson Cristino da Silva Araújo[1]; Camila Alves do Couto[4]; Maria Manuela da Fonseca Moura[1]; Socorro Calixto de Oliveira[2]; Najla Benevides Matos[3]; Gabriel Eduardo Melim Ferreira[3], Cleoni Alves Mendes de Lima[5].

INSTITUTION: Universidade Federal de Rondônia[1]; Instituto Federal de Educação, Ciência e Tecnologia de Rondônia[2]; Fundação Oswaldo Cruz Rondônia[3]; Centro Universitário São Lucas[4]; Laboratório Central de Saúde Pública de Rondônia[5] (Rua Anita Garibaldi, 4130 Bairro: Costa e Silva; CEP: 76803620 - Porto Velho/Rondônia, Brasil).

ABSTRACT:

Lung diseases caused by nontuberculous mycobacteria have been heterogeneously increasing on incidence and prevalence around the world, but the geospatial determinants of this variation are still unclear. A retrospective approach was carried out in order to determine the prevalence of NTM on pulmonary infections from 2008 to 2016 in Rondônia State. Available data on LACEN/RO database from 14 municipalities presented 114 records for NTM isolates where 52 (45,5%) were not typed and 62 (54,5%) were identified composing 15 species. The more frequent NTM species were *M. abscessus* (27%), *M. fortuitum* (18,3%), *M. avium* (18,3%) e *M. intracellulare* (13%). The remaining species were represented by one or two isolates: *M. tuscie*; *M.gordonae*; *M. gilvum*; *M. porcinum*; *M. asiaticum*; *M. paraffinicum*; *M. boucherdurhonense*; *M. colombiense*; *M. simiae*; *M. chimaera* and *M. szulgae*. The distribution of the four more-frequent species by municipality is represented by *M. intracellulare* in five, *M. abscessus* and *M. fortuitum* in four, and *M. avium* in three municipalities. *M. abscessus* was reported in 34,5% of pulmonary infections. The prevalence of the pulmonary infection by NTM by municipalities with the highest number of cases was represented by Porto Velho (14.2/100,000 habitants), Cacoal (9.4/100,000 habitants), Ariquemes (8.9/100,000 habitants) and Ji-Paraná (8.6/100,000 habitants). The correct identification of NTM species is important to distinguish between tuberculosis and other mycobacteria pulmonary diseases. Even if the prevalence observed here might be underestimated, this approach composes the base for epidemiological surveillance of mycobacteria pulmonary diseases in Rondônia. Also, the diversity of NTM species in this State may be a consequence of relevant clinical signs that received follow-up after suspicious tuberculosis.

Key words: Nontuberculous mycobacteria; *Mycobacterium abscessus*; Prevalence, Rondônia

Development Agency: PPSUS/MS; FAPERO/RO