

TITLE: EVALUATION OF DRUG SENSITIVITY IN MEMBERS OF *MYCOBACTERIUM ABSCESSUS* GROUP ISOLATED IN AMAZON REGION.

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ABSTRACT:

Members of *Mycobacterium abscessus* group have emerged as cause of a wide range of infections in humans. It may cause post-surgical, post procedural pulmonary infections especially in vulnerable hosts. These infections are more difficult to treat in this group due to limited number of drugs available and antimicrobial drug resistance. The purpose of this study was to determine the antimicrobial susceptibility profile in subspecies of group members of *M. abscessus* isolated in Para State – Northern Brazil. Sixty one isolates from clinical specimens of pulmonary and extrapulmonary infections were evaluated by broth microdilution using a commercial panel RPYMYCO Sensititre® containing the following drugs: amikacin (AMI), cefoxitin (FOX), ciprofloxacin (CIP), clarithromycin (CLA), doxycycline (DOX), imipenem (IMI), linezolid (LZD), minocycline (MIN), moxifloxacin (MXF), tobramycin (TOB) and trimethoprim/sulfamethoxazole (SXT). The evaluation of clarithromycin was performed on the third and the fourth day after incubation to verify the induced resistance. Among the 61 isolates, 14 belonged to subsp. *M. abscessus*, 21 belonged to subsp. *M. bolletii* and 26 belonged to subsp. *M. massiliense*. All isolates exhibited resistance for FOX, SXT, CIP, DOX, MIN, MXF, TOB and IMI. It was observed 77% of sensibility for LZD and AMI. Clarithromycin is the main drug used in oral treatment of infections for *M. abscessus* group but just only 25% of isolates were sensitive, 46% demonstrated induced resistance and 30% demonstrated intrinsic resistance. It was observed a high rate of resistance to clarithromycin in the group *M. abscessus* with special attention to the subspecies *M. massiliense* with 50% of isolates being resistant. These findings reinforce the high prevalence of antibiotic resistance and the need for perform sensitivity tests on all isolates of the *M. abscessus* group specially in subsp. *M. massiliense* considered sensitive in several studies. Linezolid and amikacin demonstrated good inhibition activity against this group.

Keywords: *Mycobacterium abscessus* group, antibiotic resistance, Amazon Region, Antimicrobials.