

TITLE: DETECTION OF ANTIBODIES AGAINST *Aspergillus* spp. IN PATIENTS WITH PULMONARY TUBERCULOSIS IN PUBLIC HOSPITALS OF MATO GROSSO DO SUL

AUTHORS: PONTES, R. S.; CHAVES, C. E. V.; PEREIRA, E. F.; VENTURINI, J.; NUNES, M. O.; LIMA, G. M. E.; VICENTINI, A. P.; OLIVEIRA, S. M. V. L.; PANIAGO, A. M. M.; MARQUES, A. P. C.

INSTITUTION: UNIVERSIDADE FEDERAL DE MATO GROSSO DO SUL (CIDADE UNIVERSITÁRIA, S/No, CEP: 79.070-900, CAMPO GRANDE – MS, BRASIL)

ABSTRACT:

Aspergillus fungi are colonizers of the human respiratory system, and can cause chronic pulmonary aspergillosis (CPA), a spectrum of diseases that includes aspergilloma and has a mortality of up to 85%. Aspergilloma is characterized by a mass consisting of hyphae, epithelial and defense cells that grows in pre-existing cavities such as those caused by pulmonary tuberculosis (TB). The aim of this study was to detect the presence of antibodies against *Aspergillus* spp. in patients diagnosed with TB in the Ambulatory of HUMAP-UFMS and HRMS and to associate with clinical-epidemiological variables. 10 mL of blood were collected from 36 patients with TB who had serum tested against the *Aspergillus* spp antigen in the double immunodiffusion (DID) test and 21 collected culture sputum. All signed the consent form. The DID was positive in only 1 (2.8%) patient. Of those that had sample sent to culture, 17 have a result and of these, 17.6% (n = 3) had phenotypic identification for *Aspergillus* spp. One patient, male and 26 years old, was positive in both tests (33.3%). Regarding the variables observed in the study, 77.7% were males, with a mean age of 41.6 years (SD ± 17). Among the reported life habits, 45.4% were smokers, 68.2% were alcoholics and 31.8% were illicit drug users. The most frequent clinical manifestations were weight loss and cough. The positive patient in the DID with culture positive for *A. fumigatus* was the only one who presented radiological evidence of aspergilloma, in the literature it is observed that only 25% of the patients who had the fungus isolated from pulmonary samples were diagnosed with aspergilloma, which indicates that patients with only positive culture may result from contamination or colonization. The present study has some limitations: a small sample, resulting in a single positive case. Thus, epidemiological studies of aspergilloma prevalence point to the importance of its diagnosis and treatment in addition to providing data to epidemiologic knowledge of the disease, since the aspergiloma does not have a standard diagnosis and is not notified, the early identification of aspergilloma in patients with TB leads to more efficient treatment, reducing lesion extension and mortality. The method used in both hospitals is the culture that has limitations and is not always possible to collect. Serological tests such as DID are presented as reproducible low cost and easy to perform assay in the diagnosis of aspergilloma.

Keywords: aspergiloma, double immunodiffusion, tuberculosis

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