

TITLE: EMERGENCE OF non-*C. albicans Candida* SPECIES RESISTANT TO AZOLES IN HOSPITALS OF BRAZIL MIDWEST REGION

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ABSTRACT:

Resistance to antifungals by *Candida* spp. is uncommon, however, the epidemiology of *Candida* infections is changing, with increase of non-*Candida albicans Candida* species (NCAC) resistant to azoles. In this study we investigated the incidence of *Candida* isolates and their antifungal susceptibility. We performed a prospective study in two teaching hospitals in Mato Grosso do Sul state - Brazil, namely UH-MAP (University Hospital Maria Aparecida Pedrossian) and UH-FUGD (University Hospital of the Federal University of Grande Dourados) from March 2013 to March 2014. Were included *Candida* spp. isolates from different clinical specimens. The minimum inhibitory concentrations (MICs) of fluconazole, voriconazole, itraconazole and amphotericin B were determined using the broth microdilution method according Clinical Laboratory Standards Institute patronization. For differentiation of *Candida* spp., PCR-multiplex, PCR-duplex and PCR-RFLP techniques were performed. A total of 221 *Candida* species were studied. Of these, 81 (36.65%) presented reduced susceptibility to one or more azole antifungal agents. To fluconazole, 39 (17.65%) were considered susceptible dose-dependent (SDD) and 11 (4.98%) resistant. For itraconazole: 51 (23.08%) were SDD and 12 (5.43%) were resistant. For voriconazole, 12 (5.43%) were SDD and 3 (1.36%) were resistant. All the yeasts were susceptible to amphotericin B. Most of *Candida* spp. with reduced susceptible was isolated from urine cultures (57; 70.37%) and came from inpatients in intensive care units (45; 55.55%). The *Candida* species identified were: 14 (17.28%) *Candida albicans* and 67 (82.72%) NCAC, including: 35 (43.21%) of *C. glabrata* complex, 21 (25.93%) *C. tropicalis*, 6 (7.41%) of *C. parapsilosis* complex and 5 (6.17%) *C. krusei*. Non-*C.albicans Candida* species are important agents of urinary tract infection and mainly affect critical patients. In comparison with the previous studies carried out in the Midwest region of Brazil we verified the emergence of resistance to azole antifungals, mainly by CNCA species.

Keywords: candidiasis, candidemia, epidemiology.

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