

SUSCEPTIBILITY TO CASPOFUNGIN AND MOLECULAR TYPING OF ISOLATED CLINICAL CANDIDA SPP

de Magalhães, V.M.¹, Barros, T.F.¹

¹UFBA - Federal University of Bahia (Graduate Program in Pharmacy, Pharmacy School , Street Jeremoabo Baron , s/n, University Campus Ondina - Salvador - BA)

Fungal infections affecting patients worldwide and *Candida* yeasts are inserted in this context, causing major impact on morbidity and mortality of patients admitted to the ICU. Isolates resistant to antifungal drugs are being reported, requiring investigation of sensitivity profiles. Molecular techniques are tools used to investigate outbreaks in intensive care units, barring possible routes of transmission and gel electrophoresis pulsed field gel electrophoresis (PFGE) is considered the gold standard technique in epidemiological surveys. The aim of this study was to evaluate the antifungal susceptibility and analyze the genetic variability of isolates of *Candida* from blood culture and catheter tip of patients admitted to neonatal intensive care unit of a reference maternity Salvador, Bahia, Brazil. The minimum inhibitory concentration (MIC) of caspofungin was determined by broth micro dilution, CLSI document M27 and E-test agar diffusion, while the genetic diversity assessed by PFGE technique by karyotyping and electrophoresis analysis of the genomic DNA restriction with *Sfi*I and *Bss*III. 70 isolates of *Candida* were used (41.4% *C. parapsilosis*, 30% *C. albicans* and 28.6% *C. tropicalis*) from blood culture and catheter tip. All isolates were susceptible to caspofungin when interpreted by Supplement 03; however, 7.1% had intermediate susceptibility when interpreted by Supplement 04, both the M27 protocol. The two methodologies were satisfactory with higher concordance 90%, with only minor errors. Molecular analysis of 48 isolates evaluated detected patterns identical bands for isolates of *C. albicans* and *C. tropicalis* were detected three distinct profiles for *C. parapsilosis*. *Bss*III showed better discriminatory power more satisfactory percentages of similarity to the *C. albicans* and *C. tropicalis*. These results show the need for clinical laboratory evaluate the antifungal susceptibility of *Candida* with reliable techniques and easy to perform and investigate possible outbreaks with molecular techniques in epidemiological surveillance programs.

Keywords : *Candida* susceptibility , caspofungin , PFGE.