

### **P139A**

#### **Virulence factor of *Candida tropicalis* isolated from hospitalized patients**

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*Candida tropicalis* has been reported to be one of the *Candida* species which is most likely to cause bloodstream and urinary tract infections in hospitals. Several virulence factors seem to be responsible for *C. tropicalis* infections, which present high potential for dissemination and mortality. The aim of this study was to investigate the correlation between different virulence factors (enzymes secretion, adhesion and biofilm formation) and antifungal susceptibility of several *C. tropicalis* clinical isolates. This study was conducted with 8 isolates of *C. tropicalis* obtained from urine cultures (4), from blood culture (1) and from central venous catheter (1), from patients admitted to intensive care units at the University Hospital in Maringá, Paraná, Brazil. *C. tropicalis* ATCC 750 was also used, as a control. Virulence factors evaluated included: adhesion to epithelial cells and silicone, biofilm formation and enzyme production (hemolysins, proteinases, and phospholipases). Susceptibility to fluconazole, itraconazole, voriconazole, and amphotericin B was also determined, by E-test. Regarding adhesion, it can be highlighted that *C. tropicalis* adhered significantly more ( $p < 0.05$ ) to epithelial cells than to silicone. Moreover, it was verified that all *C. tropicalis* were prone to form biofilms on silicone. Regarding *C. tropicalis* enzymatic activity, it was possible to verify that all isolates were able to express total hemolytic activity on sheep-blood agar medium supplemented with glucose. However, proteinase was only produced by two urine isolates and by the isolates from catheter and blood and only one *C. tropicalis* (from catheter) was phospholipase positive. All isolates were susceptible to voriconazole, fluconazole and amphotericin B. The largest percentage of susceptibility-dose dependence was observed for itraconazole in 4 strains (57.1%). Furthermore one clinical isolate (14.3%) from urine was found to be resistant to the same compound (MIC = 1  $\mu\text{g/ml}$ ). Thus, it is possible to conclude that there was no direct correlation between the virulence factors assayed (secretion of enzymes, adhesion to epithelial cells and silicone and biofilm formation). Concerning *C. tropicalis* susceptibility, it was not possible to establish any relation with *Candida* virulence factors as well. However, it is important to highlight that all isolates presented one or more virulence factors.