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TITLE: Yeast from urinary nosocomial infection: biofilm and susceptibility to antifungal profile

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ABSTRACT

Urinary infections caused by yeasts of *Candida* genus, in hospital environment, are frequent. The object of this work was to evaluate the susceptibility profile of yeasts isolated in patients with urinary infection to antifungal agents, comparing with broth methods microdilution and disk diffusion, and it was evaluated the capacity of these yeasts to form biofilm as well. There were used 98 samples isolated from hospitalized patients. Yeasts were isolated from urine culture with counting inferior to 10⁵ CFU/ml although mixed cultures with bacteria, and cultures collected under the use of probe without previous changing were not selected. Susceptibility tests were evaluated using the following antifungals: amphotericin B, ketoconazole, fluconazole, itraconazole, voriconazole e caspofungin. The biofilm formation was carried out in polystyrene microtitration plate. Even though there were resistant isolates however most of them were susceptible for both methods. In this work, some discrepancies were observed between the susceptibility methods, suggesting that resistant cases for disk diffusion should be confirmed through the reference method (broth microdilution). *C. tropicalis*, had the higher capacity to form biofilm (91.7%) than *C. albicans* (82.5%) and *C. glabrata* (61.3%). In order to avoid biofilm formation, we suggest that the health professionals to be careful during the manipulation of urinary catheters, once the capacity of fungi to form biofilm upon foreign bodies is considered one of the main reasons for the antifungal treatment failure. We believe that the candiduria finding requires more attention and a better monitoring, especially in patients of high risk, considering the importance to avoid systemic infections with high mortality indices. It is also interesting the identification of yeasts isolated from patients with urinary infection, and the performance of susceptibility tests to antifungals as well, in order to avoid empiric therapy, and consequently the emergence of resistant isolates taking into consideration the variability of response to the antifungals evaluated.