TITLE: IDENTIFICATION OF CLINICAL ISOLATES OF *Candida* spp. OBJECTS OF VAGINAL SECRETION AND PROFILE OF ANTIFUNGAL SENSITIVITY

AUTHORS: FURTADO, H. L. A.[1]; MENDES, T. L.[1]; SILVA, T. O.[1]; COUTO, T. C. S.[1]; FRANÇA, H. L.[1]; ABREU, V. F.[1]; SANTOS, D. C. P.[1]; MOREIRA, P. X. C.[1]; HOLANDA, R. A.[1]; SANTOS J. R. A.[1]

INSTITUTION: 1. CEUMA UNIVERSITY, SÃO LUÍS, MA (RUA JOSUÉ MONTELLO, 1 - RENASCENÇA II, CEP 65075-120, SÃO LUÍS - MA, BRAZIL).

ABSTRACT:

Vulvovaginal candidiasis is a public health problem, without epidemiological records, caused by yeasts of the genus *Candida*, belonging to the normal microbiota, but may become opportunistic pathogens due to predisposing factors that alter the balance of the vaginal environment, resulting in the proliferative increase of the fungus in the host. In this context, the objective of this work was to identify *Candida* spp. and to determine the antifungal sensitivity profile of the isolates obtained from samples of vulvovaginal secretion of women attended at the Ambulatory of Ceuma University. The phenotypic method was used in the Chromagar selective medium, where the positive samples were submitted to molecular identification by the ITS region sequencing. The rDNA ITS1-5.8S-ITS2 locus was amplified by PCR using oligonucleotides ITS5 and ITS4. To assess the sensitivity profile, the Minimum Inhibitory Concentration (MIC) of Fluconazole (0.25-128 µg / mL), Itraconazole (0.03-16 µg / mL), Amphotericin B (0.03-16 µg / mL) and Nystatin (0.125-64 µg / mL). The inocula were prepared with *Candida* spp. (CEP nº 2,519,446) suspended in saline solution (NaCl) to reach 10^6 cells / mL, followed by a 1: 1000 dilution to obtain the inoculum at a concentration of 10^3 cells / mL. The microplates were incubated at 37 ° C for 48 hours for further visual reading. The CIM was determined against five isolates, two of *C. albicans* (89 and 140), two of *C. parapsilosis* (78 and 160) and one of *C. orthopsilosis* (1). All isolates were sensitive to amphotericin B with arithmetic mean of 0.37 µg / mL, however, the *C. orthopsilosis* isolate was resistant to Nystatin (≥ 16 µg / ml). Isolates 1 and 78 were sensitive to Itraconazole (0.62-0.125 µg / ml), whereas isolates 89, 140 and 160 were resistant (≥ 16 µg / ml) and to Fluconazole (≥ 128 µg / ml), except the sample 160. The other isolates were sensitive to Fluconazole (10.56-3 µg / ml). Therefore, the identification of the pathogen species and the evaluation of the susceptibility profile of each isolate, besides the culture examination carried out in the reference laboratories, are of extreme importance in the direction of diagnosis and correct treatment, reducing the cases of resistance due to the use antifungals.

Keywords: Isolation and purification, *Candida*, Antimicrobial Action, Whole Genome Sequencing.

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