

TITLE: PREVALENCE AND ANTIFUNGAL SUSCEPTIBILITY PROFILES OF ISOLATES OBTAINED FROM WOMEN WITH VULVOVAGINAL CANDIDIASIS IN GUARAPUAVA/PR

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ABSTRACT:

Vulvovaginal candidiasis (VVC) is among the most common diagnosis in women seeking gynecological care. Although *C. albicans* is the major etiological agent involved in cases of VVC, other reports have shown an increase in the prevalence of non-*albicans*. The minimum inhibitory concentration (MIC) could help in the control of emergence of resistance and choose the best antifungal treatment for VVC. In This study we investigated the occurrence of yeasts on the vaginal mucosa of 89 patients with suspected vulvovaginal candidiasis at the health station, Guarapuava, Paraná, Brazil from February to May of 2017. The study was approved by the ethics committee of the UNICENTRO, CAAE: 49605315.5.0000.0106. Cases of VVC were considered in patients with vulvar itching, vaginal discharge, and a positive *Candida* culture. Three smear vaginal swabs were collected from each patient. One swab was used for Gram staining and other to inoculate in Sabouraud dextrose agar (SDA) and the other for tube with saline to direct microscopic examination. The yeasts were identified by their macroscopic, microscopic, according to the methods established by Kurtzman, 2011. The in vitro antifungal susceptibility testing was performed using a broth microdilution method, (EUCAST) document E.DEF 7.3.1. The results showed that of mean age of patients were 36,5 (18-55) years. More than 50% of the women were married and the commonest educational level of the women was 54,5% primary level. Vaginal candidiasis was found in 11 (12,4%) women by culture. *Trichomonas vaginalis* was detected in only 1 patient. Gram stain showed positive for yeasts in 7 (66,6%) of positives culture for yeasts. The prevalence of bacterial vaginosis (BV), vulvovaginal candidiasis (VVC) and trichomoniasis was 22,4%, 12,3%, and 1,1%, respectively for all patients. The distribution of species was as follows: *C. albicans*, 8 (72,7%) isolates; *C. glabrata*, 3 (27,3%) isolates. Antifungal activity showed that all of the *C. albicans* isolates were susceptible to Amphotericin B (0,015-0,12ug/mL), Fluconazole (0,12-4ug/mL) and Voriconazole (0,015-0,12ug/mL) and Caposfungin with MIC of the 0,015-0,12ug/mL. All *C. glabrata* isolates were susceptible to Amphotericin B and Voriconazole, however for fluconazole *C. glabrata* showed decreased susceptibility with MIC of the 8ug/mL. In conclusion, we demonstrated that *C. albicans* remains the most frequently isolated and *Candida glabrata* showed reduced fluconazole susceptibility.

Keywords: *Candida*, Prevalence, Antifungal

Development Agency: Araucaria Foundation