

Species and antifungal susceptibility of Candida causing Vulvovaginal candidiasis among pregnant mothers attending the antenatal clinic at Mulago National Referral Hospital

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ABSTRACT

Background

Vulvovaginal candidiasis (VVC) is a fungal infection of the female lower genital tract- the vagina and vulva caused by candida species. It is estimated that 40% of healthy asymptomatic women have *Candida* as normal flora in the lower genital tract. However, candida species can become causative agents of Vulvovaginal candidiasis (VVC) also known as candidiasis or moniliasis. The aim of this study was to determine the prevalence of candidiasis, the different species of *Candida* and their susceptibility patterns to the commonly used antifungals.

Methodology

Vaginal specimens were collected from two hundred seventy one consenting pregnant women attending pre-natal visits in Mulago hospital in Kampala, Uganda. Wet preparation and gram staining was performed then samples were cultured onto SDA and incubated at 37°C for 24 hours. Drug susceptibility testing was done by disk diffusion method on muller hinton agar supplemented with 2% glucose and 0.5ml of 1g of methylene blue as recommended by CLSI. Identification was done using germ tube and sugar assimilation.

Results

One hundred ninety nine were positive for vaginal candidiasis thus, giving a prevalence rate of 73.1%. We isolated and identified five species of *Candida* completely with *C. albicans* having the highest prevalence of 64%, followed by *C. glabrata* 12%, *C. tropicalis* 5%, *C. pseudotropicalis* 3%, and the least was *C. krusei* 1%. The other isolates included unidentified candida species had a prevalence of 36%. There was significant association between antibiotic use, douching three or more times a day to VVC with a p value of 0.008 and 0.053 respectively. Resistance to Itraconazole was detected in 99% of *C. albicans* and in 100% of all the non albicans species. Resistance to fluconazole was 100% in *C. krusei*, and 64% in *C. glabrata*. Resistance to Ketoconazole and Clotrimazole was below 30% in all spp except *C. krusei* where it was 50%. Isolates resistance to Nystatin was below 30% as was that of Miconazole and Econazole.

Conclusion

The prevalence of candidiasis was high 73.1% with *C.albicans* being the most prevalent specie. There was high resistance to Itraconazole and fluconazole and there was significant association of antibiotic use and frequency of douching.