CANDIDA ISOLATES FROM HIGH VAGINAL SWABS OF WOMEN OF CHILD-BEARING AGE: SPECIES DISTRIBUTION, VIRULENCE FACTORS AND ANTIFUNGAL SUSCEPTIBILITY PROFILE

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ABSTRACT

Yeasts infection of the vagina is a common problem that causes significant morbidity and affects the well-being of women. The species distribution, virulence factors and antifungal susceptibility profiles of *Candida* isolates from high vaginal swabs were determined using standard mycological method, appropriate culture media and disc diffusion technique. The results showed *C. albicans* as the most commonly isolated species, accounting for 43.9% of the total isolates followed by *C. glabrata* (24.5%), *C. tropicalis* (12.2%). *C. krusei* (7.1%), *C. parapsilosis* (5.1%) and *C. dubliniensis* (7.1%). The highest percentage of samples showing positivity for *Candida* isolates was obtained from age group 21-25 yr, followed by age groups ≤ 20yr, 26-30 yr, 31-35 yr and ≥ 41 yr with 88.0%, 85.0%, 80.0% and 66.7%, respectively. There was no statistically significant relationship between the occurrence of *Candida* isolates among the subjects in relation to marital status ($p = 0.098$), occupations ($p = 0.122$), educational level **(**$p = 0.254$), pregnancy ($p = 0.450$), diabetes ($p = 0.875$), antibiotic use **(**$p = 0.729$), HIV status ($p = 0.477$) and douching ($p = 0.279$). Amylase activity was exhibited by 39 (39.8%) *Candida* isolates, between 45 (46.0%) and 60 (61.2%) *Candida* isolates were phospholipase and proteinase producers, ≤ 16 (16.3%) of the *Candida* isolates showed positivity for lipase production, while ≥ 69 (70.4%) of *Candida* isolates produced haemolysin. The results showed that 63.3% *Candida* isolates were sensitive to Fluconazole, while 24.5% were resistant. ≥ 27.6% isolates were resistant to Ketoconazole, while 58.2% isolates were sensitive. Varied percentage susceptibilities of *Candida* isolates to Itraconazole were observed with *C. parapsilosis* showing 100 % sensitivity to ITR. ≤ 55.1% and ≤ 65.3% isolates were sensitive to Clotrimozole and Amphotericin B, respectively. The increasing number and diversity of invasive infections caused by pathogenic *Candida s*pecies is suggestive of the need to comprehensively comprehend their pathogenicity mechanisms and also search for new antifungal drugs for effective treatment of vaginitis and vulvovaginal candidiasis.

Keywords: Antifungal, *Candida*, risk factors, susceptibility, virulence.
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