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

AKINJOGUNLA, O.J.*, DIVINE-ANTHONY, O. AND NNORUEM, J.C.
Department of Microbiology, University of Uyo, Uyo, Nigeria

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 species 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.
*Correspondence: papajyde2000@yahoo.com