

## ABSTRACT

**Background:** As infection with Acquired Immune-deficiency Virus (HIV) befalls endemic in Uganda; the risk of vulvovaginal candidiasis (VULVOVAGINAL CANDIDIASIS (VVC) ) as one of the most opportunistic infections remains high. Despite this, little is known regarding the prevalence, candida speciation and their antifungal susceptibility profile. This study sought to determine the prevalence of VULVOVAGINAL CANDIDIASIS (VVC) and antifungal susceptibility pattern among HIV-infected women attending Touch Namuwongo Project (TNP) at International Hospital Kampala.

**Materials and methods:** This was a hospital based cross section study involving 150 HIV-positive women attending TNP during the months of May to July, 2017. Data was collected using self-administered questionnaire and laboratory analyses of two high vaginal swabs (HVS) for VULVOVAGINAL CANDIDIASIS (VVC) . Wet preparation, Gram stain, yeast culture, antifungal susceptibility testing using the disk diffusion method, and identification using phenotypic methods like germ tube test and Chrom ID agar were done. CD4 T- lymphocyte for the previous three-months was obtained from hospital records. Data was presented as proportions and the Chi-square test was used where a p-value of <0.05 was considered.

**Results:** The prevalence of VULVOVAGINAL CANDIDIASIS (VVC) was 30.7% (95% Confidence Interval 18.6-39.4). Majority of study participants had *C.albicans* (n=33, 71.1%). Other *Candida* species isolated were; *C. glabrata* (8.7%), *C. krusei* (17.4%) and *C.tropicalis* (2.2%). The antifungal susceptibility pattern of *Candida* species revealed that majority of the strains isolated was either intermediate or resistant to the antifungal agents. Of the 46 participants with *Candida* species, we found a statistical association with a low immunity shown by CD4 cell counts below 249cells/ $\mu$ L of blood (Odds ratio=4.8, 95% Confidence Interval 3.7-5.1), declining clinical state as designated by WHO stages III and IV (Odds ratio=2.9, 95% Confidence Interval 1.7-3.4) and not being on anti-retroviral therapy (ART) (Odds ratio=4.2, 95% Confidence Interval 3.1-6.2).

**Conclusion:** We report a high prevalence of VULVOVAGINAL CANDIDIASIS (VVC) , with *C. albicans* as the most specie. *Candida* antifungal susceptibility testing is recommended to avoid treatment failures. Also resistance to azole drugs such as fluconazole, the most frequent antifungal used in the country could necessitate routine fungal culture and in-vitro drug susceptibility testing.