



CHARACTERIZATION OF CANDIDA SPECIES IN ORAL THRUSH IN HIV SEROPOSITIVE PATIENT

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ABSTRACT

BACKGROUND AND OBJECTIVE: Globally 37.9 million people are infected with AIDS, India alone has 2.31 million patients with HIV infection. The virus targets the immune system and with waning immune system opportunistic infection appears. Oral candidiasis is the most common opportunistic fungal infection. In HIV infection the isolation of non albicans from oral candidiasis is on a rise. Hence it is not sufficient to identify *Candida albicans* alone and is a must to identify other non-albicans species. Hence the present study was undertaken to identify the isolates and correlate them to CD4+ lymphocyte count.

METHODS: The present study was conducted in the Department of Microbiology, SKMCH, Muzaffarpur over a period of 6 months from January 2019– June 2019. The study included 100 HIV seropositive cases with oral candidiasis. Sampling done with cotton tipped wooden swab, KOH mount and Gram stain done for demonstration of yeast like cells. Isolation done on SDA, BA. Isolates were further processed by germ tube test, grown on CMA, confirmation by fermentation and assimilation test done. CD4+ T cell count done. Then later statistical analysis was done.

RESULTS: Samples from 100 patients yielded 113 isolates, specificity of Gram's stain and KOH mount was 76% and 64%, respectively. SDA yielded 100% growth, Germtube was positive in all *C. albicans* and *C. dubliniensis* cases. *C. albicans* was the most common species isolated (28.31%), followed by *C. tropicalis* (26.66%), *C. guilliermondii* (17.69%), *C. dubliniensis* (10.61%), *C. krusei* (7.07%), *C. parapsilosis* (6.19%), *C. kefyr* (3.53%), least isolated species *C. glabrata* (0.88%). Mean CD4+ T lymphocyte count was 125.28 – 78.45 cells/uL of blood. 12 patients had multiple isolates with *C. tropicalis* as the most common of the 10 combinations. Multiple species were isolated in patients with CD4+ cells < 150 cells/ (p < 0.05). Present study showed 68.75% of *C. albicans* and 83.94% of non albicans as isolates from patients with CD4+ T lymphocyte count < 200 cells/uL of blood. Oral candidiasis affects the patient compliance to ART and nutritional intake.

INTERPRETATION AND CONCLUSION: There is an increase in occurrence of non-*Candida albicans* species in oral candidiasis and hence it is a must to speciate all isolates. Occurrence of certain species may be a marker for decreasing CD4+ cell count.

KEYWORDS : Oral Candidiasis, Speciation Of Candida, Hiv Seropositive, cd4+ T Lymphocyte.

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