

Comparative study of adherence of oral *Candida albicans* isolates from HIV sero-positive individuals and HIV sero-negative individuals to human buccal epithelial cells

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ABSTRACT

Aim: *Candida albicans* occurs as a commensal of the gastrointestinal tract. Under predisposing conditions, candida can produce a broad array of infections. HIV seropositive individuals show increased oral colonization compared to the HIV seronegative healthy individuals. *C. albicans* shows a variety of pathogenic factors. We have studied one such factor here; the adherence property of *C. albicans* isolated from HIV seropositive individuals and HIV seronegative to Human Buccal Epithelial Cells (HBEC) of normal healthy individuals. **Materials and Methods:** Concentrated oral rinse specimen were collected from 50 healthy volunteers (control group) and 25 HIV positive individuals (test group) and used for isolation of *C. albicans*. Adherence assay was done using *C. albicans* isolates from both groups on HBEC collected from HIV sero-negative, normal individuals. The adherence assay method described by Kimura and Pearsall was used with minor modification. **Statistical Analysis Used:** The results of Adhesion assay were subjected to statistical analysis using student "t" test. **Results:** *C. albicans* isolated from both the groups were tested for their adherence property to normal HBEC. The isolates from test group showed more adherence to HBEC compared to those of the control group, with average rate of adherence being 56.6%. The control group showed average adherence rate of 29.1%. This was statistically significant with p value equal to 0.05. **Conclusion:** *C. albicans* from HIV infected individuals showed significant rise in degree of adhesion to the buccal epithelial cells than the isolates from healthy controls, suggesting the enhancement of virulence factors such as adherence in the presence of predisposing condition.

KEY WORDS: Adherence, *C. albicans*, Human buccal epithelial cells, HIV, oral candida carriage, oral candidiasis

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