Abstract:

Aims and objectives: The integrity of oral mucosa, lined by stratified squamous epithelium, is important for the maintenance of oral health. HIV and Highly Active Anti-Retroviral Therapy (HAART), the commonly advocated treatment for HIV infection, can cause certain changes in the oral epithelium. These changes are important as useful markers of disease progression. This study is focused at assessing the cytomorphometric changes occurring in the exfoliated oral epithelial cells of HIV seropositive individuals, those not undergoing treatment (Pre-ART), and those undergoing short-term HAART and long-term HAART when compared to the control group; and to further correlate these changes with the prognosis of the disease.

Methods: The study sample comprised of 180 HIV seropositive patients belonging to three groups, and 60 uninfected individuals (control group), all aged between 20-50 years, irrespective of gender. Samples were collected using oral liquid rinse method and morphometric changes in exfoliated epithelial cells were studied.

Results: There was a highly significant correlation with significant decrease in Cytoplasmic Area (CA) and a significant increase in Nuclear Area (NA) and Nuclear-cytoplasmic area ratio (NA:CA), in each of the study groups when compared with each other and with the Control group.
**Conclusion:** HIV infection and HAART are able to induce cytomorphometric changes on the oral epithelial cells. Pre-ART group showed an overall greater effect on cells followed by the short-term and long-term HAART groups. These changes can lead to atrophy of the oral epithelium, which may in turn give rise to other oral changes.