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"INFLUENCE OF SMOKE AND SMOKELESS TOBACCO ON ORAL NEUTROPHIL COUNTS IN CONJUNCTION WITH GINGIVITIS AS COMPARED TO CONTROLS"

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ABSTRACT

Introduction: Tobacco usage in various forms like smoke or smokeless tobacco is significantly increasing in developing countries like India. It acts as an agent for increasing the susceptibility to gingivitis. In the Indian scenario, there is paucity of information in the literature related to influence of smoke and smokeless tobacco on oral neutrophil count in conjunction with gingivitis. **Aim:** The present study will be undertaken to determine the influence of smoke and smokeless tobacco on oral neutrophil count in conjunction with gingivitis as compared to controls. **Materials and Methods:** In this cross-sectional study, conducted in Hubli- Dharwad city, 120 subjects that included smokers, chewers & non tobacco users ranging from 18-40 years of age, who met the inclusion/exclusion characteristics and who signed an informed consent form were taken in to the study and their demographics were recorded. The gingival status of the study subjects were assessed by a single calibrated examiner using the modified Loe and Silness gingival index (1967) and salivary oral neutrophil counts were assessed under light microscope. **Results:** There was a statistically significant difference between the three groups (P=0.0000) with respect to the mean gingival scores and the mean neutrophil counts. The mean GI score among the smokers was 0.72±0.34, which was lower than that of the chewers and non users which were 1.12±0.37 and 0.98±0.46 respectively. The Karl pearson's correlation showed that the gingival scores and the neutrophil counts among all the study categories showed a statistically significant positive correlation. **Conclusion:** Decrease in oral neutrophil count in smokers can make them more prone for severe

periodontal diseases. Although clinically they show less signs of inflammation, due to the lack of first line of defense viz., neutrophils, the supragingival organisms become subgingival ,transforming from aerobes to anerobes thus leading to increased disease activity leading to bone & later tooth loss and ultimately to periodontal destruction.

Keywords: orogranulocytes, gingivitis, tobacco.