

Smokeless Tobacco Oral Manifestation and Inflammatory Biomarkers in Saliva

Authors : Sintija Miļuna, Ričards Melderis, Loreta Briuka, Dagnija Rostoka, Ingus Skadiņš, Juta Kroiča

Abstract : Objectives Smokeless tobacco products in Latvia become more available and favorable to young adults, especially students and athletes like hockey and floorball players. The aim of the research was to detect visual mucosal changes in the oral cavity in smokeless tobacco users and to evaluate pro - inflammatory and anti - inflammatory cytokine (IL-6, IL-1, IL-8, TNF Alpha) levels in saliva from smokeless tobacco users. Methods A smokeless tobacco group (n=10) and a control group (non-tobacco users) (n=10) were intraorally examined for oral lesions and 5 ml of saliva were collected. Saliva was analysed for IL-6, IL-1, IL-8, TNF Alpha using ELISA Sigma-Aldrich. For statistical analysis IBM Statistics 27 was used (Mann - Whitney U test, Spearman's Rank Correlation coefficient). This research was approved by the Ethics Committee of Rīga Stradiņš University No.22/28.01.2016. This research has been developed with financing from the European Social Fund and Latvian state budget within the project no. 8.2.2.0/20/I/004 "Support for involving doctoral students in scientific research and studies" at Rīga Stradiņš University. Results IL-1, IL-6, IL-8, TNF Alpha levels were higher in the smokeless tobacco group (IL-1 83.34 pg/ml vs. 74.26 pg/ml; IL-6 195.10 pg/ml vs. 6.16 pg/ml; IL-8 736.34 pg/ml vs. 285.26 pg/ml; TNF Alpha 489.27 pg/ml vs. 200.9 pg/ml), but statistically there is no difference between control group and smokeless tobacco group (IL1 p=0.190, IL6 p=0.052, IL8 p=0.165, TNF alpha p=0.089). There was statistical correlation between IL1 and IL6 (p=0.023), IL6 and TNF alpha (p=0.028), IL8 and IL6 (p=0.005). Conclusions White localized lesions were detected in places where smokeless tobacco users placed sachets. There is a statistical correlation between IL6 and IL1 levels, IL6 and TNF alpha levels, IL8 and IL6 levels in saliva. There are no differences in the inflammatory cytokine levels between control group and smokeless tobacco group.

Keywords : smokeless tobacco, Snus, inflammatory biomarkers, oral lesions, oral pathology

Conference Title : ICDOM 2022 : International Conference on Dentistry and Oral Medicine

Conference Location : Sydney, Australia

Conference Dates : February 24-25, 2022