

EFFECT OF BETEL CHEWING, TOBACCO SMOKING AND ALCOHOL CONSUMPTION ON ORAL SUBMUCOUS FIBROSIS (OSMF): A CASE CONTROL STUDY IN SRI LANKA

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The objective of the present study was to ascertain the effect of betel chewing, tobacco smoking and alcohol use in the etiology of OSMF, which had hitherto not been studied in Sri Lanka. The study included a total of 74 patients with OSMF and 74 age and sex matched controls without OSMF or any other mucosal disease who consecutively attended the Oral Medicine, Dental Hospital (Teaching, Faculty of Dental Sciences, University of Peradeniya. Clinical diagnosis of all the cases was confirmed by biopsy. Informed consent was obtained from both the case and control groups before doing biopsies and including in the study. A predetermined data sheet was used to record demographic data, history, clinical findings and the details of betel chewing, tobacco smoking and alcohol habits.

A binary logistic regression analysis was done to ascertain the influence of betel chewing, smoking, alcohol use and also to determine the effects of different combinations. All OSMF patients had at least a single habit and all OSMF patients chewed betel quid whereas 49 (66.2 %) had no habit in the control group. Betel chewing with OR of 171.83 (95 % CI = 36.35-812.25) was the only significantly associated factor in the etiology of OSMF. There were no interaction effects of chewing, smoking and alcohol consumption in the causation of OSMF. Use of all ingredients in the quid (betel leaves, areca nut, lime and tobacco) had the strongest association with the occurrence of OSMF (OR = 16.24; 95 % CI = 5.88-44.86). In conclusion, the present study has shown a strong association between betel quid chewing (including tobacco as an ingredient) and OSMF. Given this scenario and considering the association of tobacco use with the initiation of precancer and cancer, lack of successful treatment for OSMF and its risk of malignant transformation, this study shows a dire need for preventive strategies for the community where there is high risk of oral cancer.