

# Is Periodontitis Associated With Oral Neoplasms?

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**Background:** Infections have been suggested in the etiology of oral cancer. This study was carried out to evaluate the effect of periodontal disease on oral soft tissue lesions.

**Methods:** A total of 13,798 subjects aged 20 years and older with at least six natural teeth and who participated in the Third National Health and Nutrition Examination Survey (NHANES III) constituted the study population. Severity of periodontal disease was represented by clinical attachment loss (CAL) and was dichotomized as  $\leq 1.5$  mm versus  $> 1.5$  mm according to its distributions in the NHANES III population. Three separate dependent variables were employed: 1) tumor (non-specific); 2) precancerous lesions; and 3) any oral soft tissue lesion. The independent effect of CAL on those three dependent variables was assessed by weighted multiple logistic regression analyses adjusting for the effects of number of filled teeth, number of decayed teeth, presence of prosthesis, age, gender, race/ethnicity, education, tobacco, alcohol, occupational hazard, and interaction term "tobacco\*occupational hazard." Odds ratios (OR) and their 95% confidence intervals (CI) were calculated.

**Results:** CAL was not related to the presence of any soft tissue lesion (OR = 1.09, 95% CI: 0.91 to 1.31), but was specifically related to the presence of tumor (OR = 4.57, 95% CI: 2.25 to 9.30) and precancerous lesions (OR = 1.55, 95% CI: 1.06 to 2.27).

**Conclusion:** This study suggests associations between periodontal disease and the risk for precancerous lesions and tumors generating a hypothesis about a possible relationship between periodontal disease and oral neoplasms. Prospective or well-designed case-control studies with histologically confirmed incident oral cancer cases are necessary to confirm this relationship. *J Periodontol* 2005;76:406-410.

## KEY WORDS

Mouth neoplasms; oral neoplasms; oral soft tissue lesions; periodontal diseases/complications; risk factors; soft tissue neoplasms.

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