CHICAGO – June 22, 2004 – People with deep periodontal pockets had an increased risk for electrocardiographic abnormalities (ECG) according to a recent study printed in this month's issue of the Journal of Periodontology

Abstract

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Relationship Between Electrocardiographic Abnormalities and Periodontal Disease: The Hisayama Study

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Background: Recent studies have suggested a relationship between periodontitis and cardiovascular disease (CVD). This study investigated the relationship between

periodontitis and electrocardiographic (ECG) abnormalities, which are known predictors of CVD.

Methods: We examined the periodontal status of 1,111 residents of Hisayama Town, Fukuoka, Japan. Nine hundred fifty-seven (957) subjects (374 males, 583 females) with ≥10 teeth and without a medical history of CVD were included in the analysis. Probing depth (PD) and clinical attachment level (CAL) were measured on two randomly selected quadrants, one maxillary and one mandibular. A 12-lead ECG was recorded using a standard electrocardiograph. ECG abnormalities included left ventricular hypertrophy (Minnesota code 3-1) and ST depression (4-1, 2, 3). The relation of periodontal condition and ECG abnormalities was assessed with logistic regression analysis.

Results: Univariate analysis revealed that mean probing depth, mean attachment loss, number of teeth, and plaque index were significantly associated with ECG abnormalities, as well as with known risk factors of CVD. In multivariate analysis, the subjects with deep pockets (mean probing depth ≥2 mm) had an increased risk for ECG abnormalities (odds ratio [OR] = 1.6; 95% confidence interval [CI] = 1.01 to 2.50) compared to the subjects with mean PD <2 mm. Subjects with severe attachment loss (mean CAL ≥2.5 mm) had also significant risk for ECG abnormalities (OR = 1.7; 95% CI = 1.07 to 2.67) compared to those whose mean CAL was <2.5 mm.

Conclusion: This study clearly shows the relationship between periodontitis and ECG abnormalities, which are important predictors of CVD. *J Periodontol 2004;75:791-797.*