1323 Lesions of Endodontic Origin and Risk of Coronary Heart Disease

D.J. CAPLAN1, J.B. CHASEN2, J. CAI1, S. KANG1, E. KRALL3, R. GARCIA4, S. OFFENBACHER1, and J.D. BECK1, 1 University of North Carolina, Chapel Hill, USA, 2 Private Practice of Endodontics, Meriden, CT, USA, 3 Boston University, MA, USA, 4 VA Boston Healthcare System, Boston University, MA, USA

Though endodontic and periodontal inflammation have some important similarities, research into potential connections between radiographically evident "lesions of endodontic origin (LEO)" and coronary heart disease (CHD) is sparse. Objective: To evaluate whether incident LEO are related to development of CHD. Methods: Subjects were 708 male adults participating in the VA Dental Longitudinal Study, an epidemiologic study ongoing in the Boston area since the 1960's. At baseline and every three years thereafter, subjects received physical examinations, dental examinations, and full mouth radiographs. We used a time-dependent main exposure variable to represent the cumulative burden of LEO for each subject (e.g., 1 tooth with a LEO for 3 years contributed 3 "lesion-years" to the analysis). Multivariable proportional hazards regression models were used to estimate the relationship between LEO and time to CHD diagnosis, controlling for demographic, socio-economic, cardiovascular, and dental variables of interest. A single interaction term (involving the main exposure and age) was tested based on suggestions from the periodontal literature. Results: Mean age at baseline was 47.4 years. During a maximum follow-up of 32.0 years, 35% of subjects experienced ≥1 new LEO and 24% were diagnosed with CHD. LEO among those <40 years old was statistically significantly associated with risk of CHD after controlling for baseline values of education, income, total cholesterol, triglycerides, diabetes, hypertension, smoking, BMI, mean alveolar bone loss, total number of teeth, number of teeth with periapical lesions, and number of endodontically treated teeth (e.g., hazard ratios and 95% confidence intervals for subjects who were 31, 35, and 40 at baseline were 1.7 (1.2-2.3), 1.4 (1.1-1.8), and 1.1 (1.0-1.3), respectively). Conclusions: Controlling for important covariates, younger men with radiographically evident lesions of endodontic origin were at higher risk of developing coronary heart disease. Supported by NIDCR Grants R01-DE13807 and K24-DE00419, and the U.S. Department of Veterans Affairs.

Seq #138 - Oral Health Promotion
12:30 PM-2:30 PM, Thursday, 11 March 2004 Hawaii Convention Center 323-A

Back to the Behavioral Sciences/Health Services Research Program
Back to the IADR/AADR/CADR 82nd General Session (March 10-13, 2004)