0652 Relationship of Incident Root Caries and Mortality in Older Adults

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Several studies have reported a relationship between heart disease and periodontal disease, but few have examined the role of root caries in mortality. Objective: The purpose of this study was to determine if root caries incidence is associated with mortality in a random sample of Black and White community-dwelling older adults in North Carolina. Methods: The study population was derived from combining two existing databases: Duke Established Populations for Epidemiologic Studies of the Elderly (EPESE) and the Piedmont 65+ Dental Study (PDS). The study population included in the analyses was limited to the number of dentate participants with both medical and dental data for at least two of the examination periods in both databases (n=646). The exposure was the number/per year of root caries events occurring during the 84 months of the PDS. The outcomes were all-cause mortality and heart disease mortality with the primary cause of death determined from death certificates. Hazards ratios and 95% confidence intervals were derived from Cox’s partial likelihood regression models. Covariates that were evaluated included age, sex, race, tobacco use, urban dwelling, educational level, diabetes, extent of attachment loss, deterioration in functional status, and cognitive dysfunction. Results: In the survival models, variables that showed an association with all-cause mortality included root caries incidence HR=1.2 (1.1-1.4), age (over 74yrs) HR=2.0 (1.3-2.9), sex (male) HR=1.6 (1.0-2.3), educational level (<12yrs) HR=2.1 (1.3-3.3), diabetes (yes) HR=1.6 (1.1-2.5), and IADL HR=.9 (.8-1.1), physical impairment HR=1.4 (1.1-1.7), needing help HR=1.1 (1.8-1.5). When heart disease mortality was the outcome variable, root caries incidence HR=1.3 (1.0-1.5), educational level (<12yrs) HR=3.8 (1.8-7.9), urban dwelling (yes) HR=1.5 (.84-2.55), diabetes (yes) HR=1.1 (1.6-2.2), IADL HR=1.1 (.9-1.3) and physical impairment HR=1.4 (1.1-1.9) were associated with mortality. Conclusions: The results of this study indicate that incident root caries was positively related to mortality, and the relationship is independent of other study variables. This research was supported by NIDCR Grant No. DE-08060.

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