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Literature Abstract

Tooth loss and atherosclerosis: The Nagahama study

Cardiovascular disease (CVD) has been associated with oral disease in several studies that have shown a link, although a significant relationship could not be elicited in several other studies. Inflammation is central to the pathogenesis of both CVD and oral disease, such as periodontal disease, which can cause tooth loss. Therefore, this study attempted to investigate the relationship between tooth loss and arterial stiffness, which is a measure of CVD, using baseline survey data from a Japanese cohort. Cross-sectional data were collated from 8,124 adult residents (30 to 74 years of age) of Nagahama City. The cardio-ankle vascular index (CAVI) was used to assess arterial stiffness, while tooth loss was assessed with examination of the oral cavity by one of two dentists. Congenitally missing, impacted, and third molar teeth were excluded from counts, and subjects who reported tooth loss due to orthodontic treatment, malpositioning, and trauma were excluded. The association between CAVI and tooth loss was assessed using general linear models adjusted for age, sex, body mass index, smoking, elevated glycated hemoglobin levels (HbA1c), and insulin or hypoglycemic use. Results of multiple regression analysis showed a significant correlation between CAVI and tooth loss only for males. This may be explained by estrogen and its beneficial effects on the cardiovascular system. Due to limitations of a cross-sectional study, such a correlation should not be taken to be a causal relationship.

Asai K, Yamori M, Yamazaki T, et al. *J Dent Res* 2015 Mar;94(suppl 3):52S–58S. **References:** 35. **Reprints:** K. Asai, Department of Oral and Maxillofacial Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan. Email: yamori@kuph.kyoto-u.ac.jp—*Debbie P.M. Hong, Singapore*