MedicalXpress

Link found between history of periodontitis and cerebrovascular disease in men

June 30 2009

The potential role of periodontitis, an inflammatory disease of the gums, in the risk of cardiovascular disease, particularly ischemic stroke, has received growing attention during the last decade. A new study is the first prospective cohort study to use clinical measures of periodontitis to evaluate the association between this disease and the risk of cerebrovascular disease. The study is published in *Annals of Neurology*, the official journal of the American Neurological Association.

Led by Thomas Dietrich of the University of Birmingham School of Dentistry, and Elizabeth Krall of the Boston VA and the Boston University School of Dental Medicine, the study analyzed data from 1,137 men in the VA Normative Aging and Dental Longitudinal Study, an ongoing study begun in the 1960s with healthy male volunteers from the greater Boston area. A trained periodontist conducted dental exams every three years that included full mouth X-rays and periodontal probing at each tooth. Cerebrovascular disease was defined as a stroke or transient ischemic attack (TIA) and follow-up lasted an average of 24 years.

The results showed a significant association between periodontal bone loss and the incidence of stroke or TIA, independent of cardiovascular risk factors. This association was much stronger among men younger than 65 years old.

There are several possible pathways that could explain the association found in the study. There could be direct or indirect effects of the

periodontal infection and the inflammatory response, or some people may have an increased pro-inflammatory susceptibility that could contribute to both cerebrovascular disease and periodontal disease.

The study found that only periodontal bone loss, which would indicate a history of periodontal disease, not probing depth, which would indicate current inflammation, was associated with the incidence of cerebrovascular disease. Also, the stronger association in younger men seen in this and other studies may indicate a pro-inflammatory susceptibility in some men that is reflected in periodontal destruction at a younger age.

The authors note that if periodontitis caused cerebrovascular disease, it could be an important risk factor, given its relatively high prevalence and the strength of the association in younger men. It is also possible that people with periodontitis may pay less attention to health in general (e.g., they may not take medications as regularly). The authors conclude: "Large epidemiologic studies using molecular and genetic approaches in various populations are necessary to determine the strength of the association between periodontitis and cerebrovascular disease and to elucidate its biologic basis."

Source: Wiley (news : web)