

Oral-Systemic Health Connection

Clinical and research studies are increasingly unveiling links between oral health and such maladies as cancer, heart disease, pancreatic disease and diabetes. Known as “systemic diseases,” these maladies impact multiple organ-systems throughout the body, and gum disease may play a major part. (7)

The links between gum disease and several forms of cancer have been the subject of recent findings. For example, men with gum disease were reportedly 49% more likely to develop kidney cancer, 54% more likely to develop pancreatic cancer, and 30% more likely to develop blood cancers. (6)

Periodontal disease is also associated with other diseases. It was believed that oral pathogenic bacteria was the sole link. New findings, however, suggest that inflammation may be more majorly responsible for the association. Therefore, treating the inflammation caused by the bacteria, rather than targeting the bacteria, may be a more effective approach to managing both periodontitis and such systemic diseases as rheumatoid arthritis and prostatitis. (6)

Infection and inflammation due to periodontitis has also been implicated in cardiovascular events and stroke. Individuals with a prior history of periodontal disease or tooth loss are considered to be at a higher risk for peripheral arterial disease than those with no such history. (1)

Sleep disorders, particularly sleep deprivation, are purported to induce systemic inflammation, and may thus also be linked to periodontal diseases. For example, a cross-sectional epidemiological study comparing various oral health variables show a correlation between gingival inflammation and sleep disorders. (5)

Other examples include respiratory disease: Infections in oral cavity can travel to the lungs. Aspiration of bacteria from the oral cavity into the lower airway is possible due to their close proximity. Research has found that bacteria that grow in the oral cavity, especially in people with periodontal disease, can be aspirated into the lungs and cause such respiratory diseases as pneumonia. (3)

Diabetes and periodontitis--two multifactorial chronic inflammatory diseases that affect hundreds of millions individuals worldwide--exist in a bidirectional relationship. Diabetes is associated with increased prevalence, severity, and progression of periodontitis, and untreated periodontitis is associated with poorer metabolic control in individuals with diabetes. Proper treatment and control of periodontitis has been shown to aid improvement in the metabolic status in patients with diabetes. (2)

When it comes to diabetes, a dentist may be a doctor’s best friend. Successful prevention and treatment of patients with diabetes and periodontitis requires an interdisciplinary approach involving both dentists and physicians. If followed rigorously, a typical dental schedule involving biannual visits, blood pressure tests, and a close examination of oral health factors might facilitate early identification of individuals with prediabetes and undiagnosed, asymptomatic diabetes. A referral from the primary dentist to the general physician would be followed by further diagnostic tests, preventative measures, and early-stage treatment.

Periodontitis is common in the elderly and may become more common in individuals with Alzheimer's disease because of the reduced ability to be diligent in taking care of oral hygiene. Elevated serum pro-inflammatory cytokines have been connected with an accelerated rate of cognitive decline in Alzheimer's disease. A recent study hypothesized that periodontitis would be associated with increased dementia severity and a more rapid cognitive decline in Alzheimer's disease. In a six-month observational cohort study, 60 community-dwelling participants with mild to moderate Alzheimer's Disease were cognitively assessed and a blood sample taken for systemic inflammatory markers. Dental health was assessed by a dental hygienist. The data showed that periodontitis is associated with an increase in cognitive decline in Alzheimer's Disease, independent to baseline cognitive state, which may be mediated through effects on systemic inflammation. (4)

The oral health-system disease link is no longer just a theory. Sound, research-based evidence points to direct and indirect links between them. We should no longer treat them as separate entities; instead, armed with such knowledge dental and medical professionals can positively impact many lives by working together adjusting their practices.

References:

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