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The Role of Periodontal Disease on Acute Phase Proteins in Patients With Coronary Heart Disease and Diabetes

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Abstract: Aims: Chronic infections such as periodontal disease (PD) have been suggested to be a risk factor for coronary heart disease (CHD). Elevated levels of acute phase proteins are associated with increased risk for cardiovascular events in both healthy individuals and patients with known CHD. This study aimed to investigate the role of PD on C-reactive protein (CRP) and fibrinogen levels in patients with either CHD or type 2 diabetes. Materials and Methods: 80 subjects were evaluated in four groups: individuals with CHD+PD (group 1; n: 20), individuals with type 2 diabetes+PD (group 2; n: 20), individuals with PD without any systemic disease (group 3; n: 20), and healthy individuals (group 4; n: 20). Blood samples were taken at the time of periodontal examination. Results: Demographic characteristics between the four groups and periodontal parameters between groups 1, 2, and 3 were not statistically different ($P > 0.05$). CRP and fibrinogen levels were increased in groups 1, 2, and 3 compared to those in group 4 ($P < 0.05$). Conclusions: The patients in groups 1, 2, and 3 may have risk for future cardiovascular events. Findings of the present study seem to indicate that periodontitis contributes to systemic inflammation due to higher CRP and fibrinogen levels. Physicians should be aware that maintaining periodontal health might be effective in reducing cardiovascular events risk in periodontitis subjects with/without CHD and diabetes.

Key Words: Cardiovascular risk, C-reactive protein, fibrinogen, periodontal disease, periodontitis

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