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## Original Article

## Periodontal Disease as a Risk Factor for Ischemic Heart Disease

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## Abstract:

**Background:** Coronary artery disease is recognized as one of the three major causes of mortality around the world. The role of inflammation in producing coronary artery disease has been established in previous studies. Since periodontitis, which is highly prevalent, is considered as a cause of inflammation, its influence on producing coronary artery disease was investigated in the present study considering its four main indices.

**Methods:** In this case-control study, 60 patients with angiographically proven coronary artery disease were selected as case group. After matching for some baseline characteristics including educational level, age, sex, and some established risk factors for coronary artery disease, 60 healthy individuals were selected as control group from a population in whom coronary artery disease had been angiographically ruled out. Then, the existence of periodontitis was compared with statistical methods in these two groups, considering four different dental indices.

**Results:** The mean plaque index (PI) was  $57.82 \pm 2.92\%$  in cases vs.  $35.73 \pm 2.53\%$  in controls ( $p < 0.05$ ). Mean bleeding on probing (BOP) was  $36.3 \pm 3.38\%$  in cases versus  $18.6 \pm 2.6\%$  in controls, while mean Attachment Loss  $> 4\text{mm}$  was  $35.14 \pm 3.89\%$  and  $15.48 \pm 2.79\%$  in cases and controls, respectively ( $P < 0.05$ ). The mean loss of teeth (LOT) was not significantly different in cases and controls ( $5.08 \pm 0.52$  versus  $5.38 \pm 0.53$ ,  $P > 0.05$ ). Therefore, except for the number of lost teeth, there was a statistically significant difference between these two groups. For an evaluation of independent variables, multiple logistic regression analysis was used. Odds ratio was 1.02 for attachment loss and 2.2 for BOP.

**Conclusion:** Periodontitis may be counted as a risk factor for coronary artery disease and it is essential to study the effects of control and management of these diseases as primary and secondary prevention for coronary artery disease in future studies.

## Keywords:

Risk factors , Periodontitis , Coronary artery disease

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