

Research Article

Effect of treating periodontitis on C-reactive protein levels: a pilot study

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Background

Periodontitis is associated with elevated levels of C-reactive protein and fibrinogen and it may be a coronary heart disease risk factor. We wanted to study if treatment of periodontitis can decrease the levels of these inflammatory markers.

Methods

C-reactive protein and fibrinogen levels were measured in 35 patients (21 M, 14 F, mean age 50 years) with adult periodontitis, before and after treatment.

Results

The median baseline C-reactive protein level in the patients was 1.05 mg/l and it decreased to 0.8 mg/l ($P = 0.05$) after periodontal treatment. Of the 30 patients who could be included in the analyses, 24 patients had a baseline level below 2 mg/l (the 95th percentile limit in Finland); 6 patients had levels higher than this. Elevation of the baseline C-reactive protein level or the magnitude of its decrease was not associated with severe form of periodontitis. The decrease in C-reactive protein levels was at least 50% in 4/6 of those with elevated baseline levels, as compared with 3/24 of the rest of the patients ($p = 0.016$). No corresponding effect was observed in fibrinogen levels.

Discussion

To our knowledge this is the first study showing that treating adult periodontitis decreases CRP levels, as measured with a sensitive assay. The decrease in CRP levels observed in our study was of the same magnitude as the difference in CRP levels that have been shown to be associated with increased CHD risk in several studies.

Conclusions

Periodontitis seems to increase C-reactive protein only in some individuals, presumably the ones reacting to it with a systemic inflammatory reaction. Periodontal treatment decreases C-reactive protein levels in these individuals and it may thus decrease their risk of coronary heart disease.