Java project on periodontal diseases: effect of vitamin C/calcium threonate/citrus flavonoids supplementation on periodontal pathogens, CRP and HbA1c

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Abstract
Objective: To assess in a periodontally diseased rural population deprived from regular dental care and having poor dietary conditions, the effect of vitamin C/calcium threonate/citrus flavonoids (ViC/Ca/Fl) supplementation on subgingival microbiota and plasma levels of vitamin C, HbA1c and hsCRP.

Material & Methods: The study population consisted of 98 subjects who previously participated in a prospective study on the natural history of periodontitis. Participants were instructed to consume one tablet/day containing 200 mg Ester C® calcium ascorbate, 25 mg calcium threonate and 100 mg citrus flavonoids for 90 days. Following parameters were evaluated: prevalence/amount of seven traditional periodontal pathogens, cytomegalovirus, Epstein-Barr virus (EBV), and plasma levels of vitamin C, HbA1c and hsCRP.

Results: After ViC/Ca/Fl supplementation, 100% of subjects showed normal plasma vitamin C values compared to 55% before. At baseline, 69% of subjects harboured Aggregatibacter actinomycetemcomitans, >97% the other periodontal pathogens and 73% EBV. Supplementation with ViC/Ca/Fl reduced the subgingival load of all studied bacteria (p-value: 0.014-0.0001) and EBV (p < 0.0001) substantially in all initially positive subjects. Plasma levels of HbA1c and hsCRP dropped in all subjects (p < 0.0001).

Conclusion: This uncontrolled study suggested that supplemental ViC/Ca/Fl may be helpful in reducing subgingival numbers of periodontal pathogens and EBV, and promoting systemic health.

Key words: CRP, HbA1c; periodontal pathogens; periodontal yeast; vitamin C absorption; vitamin C/calcium threonate/citrus flavonoids supplementation

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