

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 (VitC/Ca/FI) 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 VitC/Ca/FI supplementation, 100% of subjects showed normal plasma vitamin C values compared to 55% before. At baseline, 48% of subjects harboured *Aggregatibacter actinomycetemcomitans*, >97% the other periodontal pathogens and 73% EBV. Supplementation with VitC/Ca/F reduced the subgingival load of all studied bacteria (*p*-values: 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 VitC/Ca/FI may be helpful in reducing subgingival numbers of periodontal pathogens and EBV, and promoting systemic health.

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

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Conflict of interest and source of funding statement

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