The effect of flavonoids and vitamin C on periodontitis

No registrations found.

Ethical review	Not applicable
Status	Pending
Health condition type	-
Study type	Interventional

Summary

ID

NL-OMON22290

Source
NTR

Brief title
QSIPT

Health condition

Periodontitis - Parodontitis
Vitamin C - Vitamine C
Flavanoids - Flavonoiden
Quercetin - Quercetine

Sponsors and support

Primary sponsor: Academic Centre for Dentistry Amsterdam (ACTA)
University of Amsterdam (UVA) and Vrije Universiteit (VU) Amsterdam
Gustav Mahlerlaan 3004, 1081 LA Amsterdam
The Netherlands
Source(s) of monetary or material Support: ACTA
Eklund Foundation www.eklundfoundation.org

Intervention

Outcome measures

Primary outcome

The primary response variable of the present study with respect to the clinical measurements is bleeding on pocket probing (bop).

Secondary outcome

With regard to the systemic inflammatory biomarkers HbA1C, hs-CRP, and vitamin C (from venous blood).

Study description

Background summary

Background:

An important aim of the periodontal professional is to improve and promote periodontal health as part of oral health, general health and well-being. Research of the last decades showed that smoking, stress, and an unhealthy diet have a detrimental effect on the periodontal condition. Periodontitis patients have lower plasma levels of vitamin C compared to healthy controls. In addition, a correlation has been found between the level of vitamin C in the diet and the level of vitamin C in plasma of healthy controls. In periodontitis patients this correlation was not found. The studies by Van der Velden et al. (2006) on the natural history of periodontitis in people living in Java, who had no access to dental care are well known. In this population the severity of periodontitis appeared to be related to the consumption of guava fruit. The more guava fruits were consumed, the less the severity of periodontitis. Guava fruit contains an extremely high concentration of vitamin C and in addition many flavonoids, among others quercetin. Quercetin has a number of characteristics that could explain the possible positive effect of guava fruit on the periodontal condition. The initial periodontal treatment is the most important therapy for our periodontal patients. It consist of supra- and subgingival plaque and calculus removal as well as thorough oral hygiene instruction. An additional aim in the treatment of periodontitis is improving the host resistance. In this respect smoking cessation and reduction of stress have been studied extensively. Also, a healthy diet consisting of fruits and vegetables contributes to an improved host resistance. On the basis of the above it may be suggested that vitamin C with or without quercetin supplementation could improve the periodontal resistance and thereby the results of periodontal therapy.

Objectives:

To evaluate the inflammatory reducing effect, in the periodontal tissues and systemically, of vitamin C with quercetin and other flavonoids in untreated periodontal disease.

Secondly to evaluate the effect of vitamin C with quercetin and other flavonoids compared to vitamin C alone on periodontal and systemic parameters as an adjunct to initial periodontal therapy.

Design:

A double blind parallel randomized controlled longitudinal study

Study objective

1. The use of food supplements containing vitamin C with quercetin and other flavonoids can reduce inflammation clinically (assessed by means of periodontal parameters), and systemically (assessed by means of biomarkers), in patients diagnosed with periodontitis who are on the waiting list for periodontal treatment.
2. Vitamin C with quercetin and other flavonoids as an adjunct to initial periodontal therapy has an additional positive effect on periodontal and systemic treatment results when compared to vitamin C alone.

Study design

intake (T0)

start of initial therapy (T1)

3 months after the last initial treatment session (T2)

Intervention

The intervention will be the intake of daily food supplements in the two test groups as compared to the intake of non-active supplements in the control group.

Contacts

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Eligibility criteria

Inclusion criteria

- age: ≥18 years;

- proximal bone loss of ≥ 3mm in 2 non-adjacent teeth;

- probing pocket depth ≥ 3 mm and bleeding on probing on at least 25% of their total sites and documented radiographic bone loss;

- good general health.

Exclusion criteria

- diagnosis of any acute periodontal problem which requires immediate treatment;

- use of antibiotics within the previous 6 months;

- pregnant or lactating women;

- previous initial periodontal treatment within the last year;

- current orthodontic treatment;

- use of any medication which may interfere with quercetin, or with the study outcomes.

- current daily use of supplements containing vitamin C

Study design

Design

Study type:	Interventional
Intervention model:	Parallel
Allocation:	Randomized controlled trial
Masking:	Double blinded (masking used)
Control:	Placebo

Recruitment

NL

Recruitment status:	Pending
Start date (anticipated):	01-04-2018
Enrollment:	81
Type:	Anticipated

Ethics review

Not applicable

Application type:	Not applicable

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
NTR-new	NL6747
NTR-old	NTR6925
Other	Eklund Foundation : 2017-075

Study results