

‘PLAQUE INHIBITION OF TWO COMMERCIALY AVAILABLE CHLORHEXIDINE MOUTHRINSES’

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BACKGROUND

Chlorhexidine (CHX) 0.2% solution has some limited side-effects such as extrinsic tooth staining, poor taste, taste disturbance, sensitivity changes in tongue, pain, and the content of alcohol. These side effects led to the search of new formulations.

AIM

The aim of the present study was to assess the effect on plaque inhibition and taste perception of two commercially available mouthrinses (0.12% CHX non-alcohol base with 0.05% cetylpyridinium chloride (CPC) versus 0.2% CHX alcohol base).

MATERIAL & METHODS

The study was designed as a single-blind, randomized two group parallel experiment, to compare two different commercially available mouthrinses, during a 3-day plaque accumulation model. Forty healthy volunteers were enrolled in the study and received a thorough dental prophylaxis at the beginning of the test period. Over a 72-h experimental non-brushing period, during which subjects abstained from all forms of mechanical oral hygiene, one group (test) used a 15ml alcohol free 0.12% CHX (518 mg) mouthrinse on a CPC base (PERIO•AID[®], CHX + CPC), twice daily for 30 s. The other group (control) used a 10ml 0.2% CHX (520 mg) mouthrinse on an 11.8% ethanol alcohol base (CORSODYL[®], CHX + ALC), twice daily for 60 s. After 72 h of plaque formation, the amount of plaque was evaluated. By the use of visual analogue scale, the subjects were asked for their appreciation of the taste of the mouthrinse they had used.

RESULTS

The mean plaque index for the CHX + CPC group was 0.97 and for the CHX + ALC group 0.78. After 72 h of non-brushing, there was no significant difference in plaque accumulation between the two groups. The answers to the questions (taste perception and after-taste) showed a statistically significant difference between the two groups. The mean visual analogue scale (VAS) scores for taste appreciation on a scale from very bad to very good taste (0–10) were 5.92 for the CHX + CPC group and 4.10 for the CHX + ALC group ($p=0.02$). The mean visual analogue scale (VAS) scores for the after-taste on a scale from very short to very long (0–10) were 7.24 for the CHX + CPC group and 5.38 for the CHX + ALC group.

	CHX + CPC	CHX + ALC	p- value
N	19	20	
Plaque index	0.97 (0.46)	0.78 (0.31)	0.14
Taste	5.93 (0.50)	4.13 (1.92)	0.02*

CONCLUSIONS

Within the limitations of the present study design, it can be concluded that rinsing with a 0.12% CHX mouthrinse on a non-alcohol base with 0.05% CPC (PERIO-AID®) is not significantly different from rinsing with a 0.2% CHX mouthrinse on an alcohol base (CORSODYL®). Also It appeared that the subjects appreciated the taste of the non-alcohol CHX solution much better.

PRACTICAL IMPLICATIONS

This study demonstrated that regarding plaque inhibition, a 0.12% chlorhexidine mouthrinse without alcohol in its formula was as effective as a 0.2% chlorhexidine plus alcohol, and the taste was remarkably improved