Our Name of Study: Gengigel Mouthrinse – 4-day Plaque Re-growth
Rodrigues et al. 2010


Design: Single-blind, controlled and randomised trial. N=45 healthy volunteers. Standard protocol no brushing 4-day plaque regrowth. Subjects rinsed for 1 minute twice daily with either: 1. Hyaluronan (HA) 0.025% mouthrinse, 2. Chlorhexidine 0.2% mouthrinse (+ve control) or 3. Mint-flavoured distilled water (-ve control).

Associated in vitro study of antimicrobial activity of test substances vs. three periodontopathogens: Porphyromonas gingivalis (Pg), Aggregatibacter actinomycetemcomitans (Aa) and Prevotella intermedia (Pi).

Measures: Plaque index (PI), bleeding index (BI) at baseline and day 5. Microbiology – isolated strains of Pg, Aa and Pi cultured anaerobically with each test rinse then samples taken at 1, 2 and 5 minute exposure and cultured anaerobically on blood-agar plates for 48 hours.

Outcome: PI statistically significantly lower for both the hyaluronan (p=0.045) and chlorhexidine (p=0.033) rinses (when compared with negative control). Difference between hyaluronan and chlorhexidine not statistically different (p=0.69). No statistical difference between treatments in respect of bleeding.

In the microbiological evaluation chlorhexidine had a good and expected antimicrobial activity versus all three periodontopathogens. The hyaluronan had a good antimicrobial effect on Pi and Aa, but was ineffective at this concentration against Pg.

Bottom Line: This is a ‘standard’ protocol used in evaluating the antiplaque efficacy of experimental mouthrinses. It includes both a negative control (water) and a positive control (chlorhexidine) as a ‘litmus-paper’ check that the trial was correctly done – it was. Most proprietary antiplaque mouthwashes contain synthetic antiseptic compounds (e.g. triclosan, cpc, benzalkonium). This study supports the use of a more natural ingredient - 0.025% hyaluronan solution (Gengigel Mouthrinse) - as an anti-plaque mouthwash.

Claims supported: Gengigel Mouthrinse inhibits the growth of plaque when used twice daily and for one minute.

Low strength solutions of hyaluronan, such as Gengigel Mouthrinse, have been shown to kill important periodontopathogens when studied in vitro.