

# CLINICAL PAPER ONE PAGERS

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

- Citation Details:** Hyaluronan-containing mouthwash as an adjunctive plaque-control agent. Rodrigues SV., Acharya AB., Bhadbhade S. & Thakur SL. Oral Health and Preventive Dentistry (2010), Vol 8, (4) pp389-394
- 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*.