Meta-Analysis of Gingivitis Effects with a 0.454% Stannous Fluoride Dentifrice

RESULTS

- Highly significant (p<0.001) effects were also found for the 0.454% stannous fluoride group versus control at Month 6 in each of the following regions: anterior (20.2% vs. control), posterior (18.3%), maxillary (18.3%), mandibular (20.5%), facial (21.9%) and lingual (17.1%).

Antiplaque Efficacy of Stannous Fluoride Dentifrice in Power Brush Users


CONCLUSION

- Despite the significant clinical antiplaque benefits of Oral-B® Triumph™ power toothbrush, the application of clinically proven antibacterial stannous fluoride further improved hygiene effectiveness by primarily controlling plaque regrowth between hygiene interventions. Crest® Pro-Health™ paste provides additive therapeutic effectiveness in power brush users.

OBJECTIVE

Numerous studies have demonstrated that power toothbrushes and antibacterial dentifrices (stabilized stannous fluoride) can separately provide improvements in plaque control and oral health. In this study, we assessed the additive effectiveness of stannous fluoride hexametaphosphate dentifrice (Crest Pro-Health - CPH) in subjects using an Oral-B® Triumph™ power toothbrush in an intervention based Digital Plaque Image Analysis methodology.

MATERIALS AND METHODS

- Sixteen subjects were assigned commercial tubes of Crest® Cavity Protection dentifrice and an Oral-B® Triumph™ toothbrush (CCP-OBT) with instructions for bid brushing morning and evening.
- Subjects remained on CCP-OBT dentifrice for two weeks. During week 2 – subjects were evaluated for diurnal plaque levels 3 separate grading days each including assessments of pre brush a.m; post brush a.m. and p.m. plaque regrowth respectively (mid afternoon) using standardized UV imaging techniques as described previously.*
- At week 3, subjects replaced CCP dentifrice with stannous fluoride dentifrice and subjects continued brushing for two additional weeks with plaque re-evaluated during week 4.
Antiplaque Efficacy of Stannous Fluoride Dentifrice in Power Brush Users

RESULTS

• Pre brushing/Overnight (mean plaque % ±SD):
  CCP: 8.8±4.9; CPH = 6.3±4.2
  29.1% relative reduction p < 0.05

• Post brushing/Immediate (mean plaque % ±SD):
  CCP: 2.6±1.8; CPH = 2.1±1.3
  17.9% relative reduction, not significant

• P.M. regrowth/Daytime (mean plaque % ±SD):
  CCP: 5.6±3.0; CPH = 4.1±2.5
  26.8% relative reduction p < 0.05

Averge % Plaque Coverage** at each Measurement Point

<table>
<thead>
<tr>
<th>% Reduction</th>
<th>17.9%</th>
<th>26.8%*</th>
<th>29.1%*</th>
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</table>

** % Plaque Coverage = Total pixels classified as plaque / Total pixels classified as plaque and tooth x 100

*p < 0.05 Anova

Anti-gingivitis Efficacy of a Stabilized 0.454% Stannous Fluoride/Sodium Hexametaphosphate Dentifrice: A Controlled 6-Month Clinical Trial

OBJECTIVE
To investigate the long-term anti-gingivitis efficacy of a stabilized 0.454% stannous fluoride/sodium hexametaphosphate dentifrice compared to a negative control dentifrice.

MATERIALS AND METHODS

• 0.454% stannous fluoride/sodium hexametaphosphate experimental dentifrice (Crest Pro-Health) was compared to a negative control dentifrice (Colgate® Cavity Protection).

• Study subjects were 143 generally healthy adults with a minimum of 18 natural teeth, a baseline Modified Gingival Index score of 1.75 - 2.3, and a Turesky Plaque Index score of ≥1.5.

• Subjects were randomly assigned to either the experimental stannous fluoride/sodium hexametaphosphate dentifrice or the negative control dentifrice to use over 6 months and were instructed to brush twice daily for 1 minute with a manual soft toothbrush.

• At baseline, oral soft tissue was examined, subjects were scored for gingivitis (Modified Gingival Index), plaque (Turesky Plaque Index), gingival bleeding (Gingival Bleeding Index) and received a dental prophylaxis.

• At Months 3 and 6 plaque, gingivitis, gingival bleeding, and safety were re-assessed.

RESULTS

• 130 subjects completed the 6-month study.

• At 6 months, scores for the experimental group compared to the negative control group were significantly reduced for gingivitis (Modified Gingival Index) (P<0.001; 21.7%), for bleeding (Gingival Bleeding Index) (P<0.001; 57.1%), and for plaque (Plaque Index) (P=0.01; 6.9%).

• No adverse oral soft-hard-tissue effects or extrinsic tooth staining were observed.