Gingivitis

Gingivitis: inflammation of the gums

- Gingivitis, the mildest form of periodontal disease, affects more than 50% of the US adult population. If left untreated, gingivitis can progress to periodontitis which may eventually lead to tooth loss. Recent findings also suggest that periodontal disease may be related to certain systemic conditions.
- Removing and inhibiting plaque biofilm reduces gingival inflammation and bleeding, helping to prevent the progression of gingivitis.
- Incorporating chemotherapeutic dentifrices into patients’ home care routine is a convenient way to provide protection against plaque and gingivitis.

STANNOUS FLUORIDE AND GINGIVAL HEALTH

- Stannous fluoride is the only fluoride agent that helps protect against plaque and gingivitis in addition to its anticaries and desensitizing benefits.
- Research shows stannous fluoride has bacteriostatic and bactericidal properties.
- The benefits of stannous fluoride for the reduction of gingival inflammation and bleeding are supported by an extensive body of clinical research.

The Comparative Efficacy of Stabilized Stannous Fluoride/Sodium Hexametaphosphate Dentifrice and Sodium Fluoride/Triclosan/Copolymer Dentifrice for the Control of Gingivitis: A 6-month Randomized Clinical Study


CONCLUSION

- Over a 6-month period a stabilized 0.454% stannous fluoride/sodium hexametaphosphate dentifrice (Crest® Pro-Health™) showed a statistically significant benefit in reducing gingivitis compared to a positive control triclosan/copolymer dentifrice.

OBJECTIVE

To investigate the long-term antigingivitis efficacy of a stabilized 0.454% stannous fluoride/sodium hexametaphosphate dentifrice versus a positive control dentifrice.

MATERIALS AND METHODS

- A 0.454% stabilized stannous fluoride/sodium hexametaphosphate dentifrice (Crest Pro-Health) was compared to a positive control dentifrice with 0.243% sodium fluoride/0.30% triclosan/2.0% Gantrez copolymer (Colgate® Total®).
- Study subjects were 199 generally healthy adult subjects with a minimum of 16 natural teeth excluding third molars.
- At baseline, oral soft tissue was examined. The Löe and Silness Gingival Index (GI) was used to measure gingivitis and this was followed by a dental prophylaxis.
- Subjects were randomly assigned to either the stannous fluoride/sodium hexametaphosphate dentifrice or the triclosan/copolymer control dentifrice to use over 6 months and were instructed to brush twice daily for one minute with a manual soft toothbrush and assigned dentifrice. Their toothbrushing was supervised on 3 days of each week.
- At Months 3 and 6 gingivitis and safety were re-examined.
RESUL\T\S

- Data were analyzed for 186 subjects who completed the study.
- At 6 months both groups showed highly significant reductions in GI scores compared to baseline (P<0.001) and group differences were statistically significant (P=0.001). Adjusted mean GI scores were 42.6% lower at 3 months and 25.8% lower at 6 months for the stannous fluoride/sodium hexametaphosphate dentifrice.
- At 6 months both groups showed highly significant reductions in the average number of gingival bleeding sites (sites graded as 2 or 3 based on GI scoring) compared to baseline (P<0.001) and group differences were highly statistically significant (P<0.001). Adjusted mean number of gingival bleeding sites was 43.4% lower at 3 months and 27.4% lower at 6 months for the stannous fluoride/sodium hexametaphosphate dentifrice as compared to control.
- No adverse reactions or tooth staining was reported.

<table>
<thead>
<tr>
<th>Dentifrice</th>
<th>N</th>
<th>Baseline (Mean ± SD)</th>
<th>Score (Adjusted Mean ± SE)</th>
<th>% Reduction</th>
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<tr>
<td>gingival Index Scores</td>
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<tr>
<td>Month 3 Control</td>
<td>96</td>
<td>0.50 ± 0.25</td>
<td>0.31 ± 0.01</td>
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<td>Month 3 SnF2/SHMP</td>
<td>100</td>
<td>0.51 ± 0.32</td>
<td>0.18 ± 0.01</td>
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<td>Month 6 Control</td>
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<td>0.51 ± 0.36</td>
<td>0.37 ± 0.02</td>
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<tr>
<td>Month 6 SnF2/SHMP</td>
<td>95</td>
<td>0.52 ± 0.32</td>
<td>0.27 ± 0.02</td>
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<tr>
<td>Number of Gingival Bleeding Sites</td>
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<tr>
<td>Month 3 Control</td>
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<td>39.8 ± 20.3</td>
<td>24.6 ± 1.07</td>
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<tr>
<td>Month 3 SnF2/SHMP</td>
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<td>13.9 ± 1.05</td>
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<tr>
<td>Month 6 Control</td>
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<td>40.1 ± 20.4</td>
<td>28.9 ± 1.49</td>
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<tr>
<td>Month 6 SnF2/SHMP</td>
<td>95</td>
<td>40.6 ± 26.2</td>
<td>21.0 ± 1.46</td>
<td>27.4</td>
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</table>

* Adjusted means and standard errors (SE) from analysis of covariance with baseline score as covariate.

CONCLUSION

- Over a 12-week period Crest® Pro-Health™ showed a clinically and statistically significant effect on the control of gingivitis in subjects who were previously nonresponsive or minimally responsive to 6 months of use of a triclosan/copolymer dentifrice.

MATERIALS AND METHODS

- Dentifrice was Crest Pro-Health (0.454% stabilized stannous fluoride/sodium hexametaphosphate).
- Study subjects were 41 adult participants with 6-month gingivitis levels similar to their baseline scores in a separate 6-month efficacy trial in which they used a 0.243% sodium fluoride/0.30% triclosan/2% Gantrez copolymer dentifrice.*
- Subjects were provided with Crest Pro-Health to use over 12 weeks and were instructed to brush twice daily with a manual soft toothbrush. Their toothbrushing was supervised on 3 days of each week.
- At Weeks 6 and 12, oral soft tissue was examined and the Löe-Silness Gingival Index (GI) was used to measure gingivitis; baseline gingivitis scores were the 6-month scores from the previous study.

RESULTS

- Data were analyzed for 38 subjects who had complete data.
- The average 6-week and 12-week GI scores were statistically significantly better (i.e. lower) than scores at baseline (p=0.001, <0.001, respectively).
- The average 6-week and 12-week number of gingival bleeding sites were statistically significantly better (i.e. lower) than scores at baseline (p=0.001, <0.001, respectively).
- No adverse events were reported.