Effect of amine fluoride/stannous fluoride containing toothpaste and mouth rinse on dental plaque, gingivitis, plaque and enamel F⁻ accumulation


Trial conditions

Products under investigation
1. Amine fluoride/stannous fluoride toothpaste
2. Meridol rinse (250 ppm F⁻)
3. Non-fluoridated toothpaste (placebo)

Participants
92 school children; average age 12.4 years

Methodology
Plaque Index PI (Silness & Löe, 1964)
Sulcus Bleeding Index SBI (Mühlemann & Son, 1971)

Trial

The children were randomly distributed in four groups:
Group 1: placebo toothpaste
Group 2: amine fluoride/stannous fluoride toothpaste
Group 3: placebo toothpaste and meridol rinse
Group 4: amine fluoride/stannous fluoride toothpaste and meridol rinse
The duration of the double-blind trial was 12 weeks.

Application
Toothbrushing twice daily
After toothbrushing, rinsing with 10ml for 1 minute

Results

Reduction of plaque

<table>
<thead>
<tr>
<th>Group</th>
<th>Subjects</th>
<th>Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>22</td>
<td>18%</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>17%</td>
</tr>
<tr>
<td>3</td>
<td>22</td>
<td>14%</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>33%</td>
</tr>
</tbody>
</table>

Use of a toothpaste resulted in a reduction in plaque. The combined use of a toothpaste with meridol rinse resulted in a marked potentiation of the plaque-reducing effect.
Reduction of gingival inflammation

Use of amine fluoride/stannous fluoride, either in the form of toothpaste or rinse, resulted in a 30% reduction of the Sulcus Bleeding Index. Combined use of the two amine fluoride/stannous fluoride preparations resulted in further improvement of the inflammation status, and an overall SBI reduction of 50%.

Conclusions

Use of amine fluoride/stannous fluoride results in a marked decrease in plaque and gingival inflammation, whereby a combination of toothpaste with rinse is most effective.