Efektivitas aplikasi varnish SDF dan PPF pada dentin dalam waktu 60 hari = Effectivity of varnish SDF and PPF application in dentine within 60 days

Priscilla Dayanara, author

Abstrak

Latar Belakang: Silver Diamine Fluoride SDF dan Propolis Fluoride PPF dapat mencegah karies karena mengandung agen remineralisasi yaitu fluoride dan agen antibakteri yaitu silver pada SDF dan flavonoid pada PPF.
Tujuan: Penelitian ini bertujuan untuk menganalisis efektivitas aplikasi varnish SDF dan PPF pada dentin dalam waktu 60 hari.
Metode: Enam puluh spesimen dentin gigi permanen manusia berbentuk balok 4x4x2 mm dibagi menjadi 6 kelompok waktu; 0 hari, 1 hari, 7 hari, 14 hari, 30 hari, dan 60 hari. Setiap kelompok diaplikasikan varnish SDF dan PPF sebanyak 20 ?L di sisi oklusal. Pada uji fluoride seluruh spesimen direndam pada air deionisasi, sedangkan pada uji flavonoid seluruh spesimen direndam pada cairan etanol 20. Kelompok perlakuan dikocok dengan kecepatan 45 rpm selama 30 menit bergantung pada kelompok waktunya. Pengukuran ion fluoride menggunakan alat ion selective electrode dan pengukuran absorbansi flavonoid menggunakan spektrofotometer dengan panjang gelombang 425 nm.
Hasil: Terdapat peningkatan konsentrasi ion fluoride setelah aplikasi kedua varnish dan SDF melepaskan ion fluoride lebih banyak dibandingkan PPF. Terdapat peningkatan absorbansi flavonoid setelah aplikasi PPF.
Kesimpulan: Aplikasi SDF dan PPF pada dentin efektif dalam waktu 60 hari.
.....Background: Caries are preventable by Silver Diamine Fluoride SDF and Propolis Fluoride PPF due to their fluoride and antibacterial agent content with aim of teeth remineralization.
Objective: This study aims to analyse effectivity of varnish SDF and PPF application in dentine within 60 days.
Methods: Sixty blocks 4x4x2 mm human permanent teeth dentine speciments were divided into six time groups 0 day, 1 day, 7 days, 14 days, 30 days, and 60 days. SDF and PPF varnish 20 L were applied to speciments rsquo occlusal surface. For fluoride test, all speciments were submerged in deionized water, in contrast speciments were submerged in ethanol 20 for flavonoid test. In treatment group, speciment were shaked for 30 minutes at 45 rpm everyday in accordance to their time group. Ion selective electrode and spectrophotometer with 425 nm wavelenght absorbance were utilised for fluoride ion and flavonoid absorbance measurement respectively.
Results: There is an increase in fluoride ion concentration after SDF and PPF application in dentine and SDF releases more fluoride ion compared to PPF. There is an increase in flavonoid absorbance after PPF application.
Conclusion: SDF and PPF application in dentine is effective within 60 days.