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PERBEDAAN KEKASARAN PERMUKAAN BAHAN RESTORASI *GLASS IONOMER CEMENT* AKIBAT PENYIKATAN DENGAN PASTA GIGI PEMUTIH DAN KONVENSIONAL

x+68 halaman, 6 gambar, 5 tabel, 1 grafik, 6 lampiran

ABSTRAK

Latar Belakang: *Glass ionomer cement* (GIC) adalah salah satu bahan restorasi yang banyak digunakan di bidang kedokteran gigi. Di dalam rongga mulut, GIC terpapar dengan berbagai substansi, diantaranya adalah pasta gigi, yang merupakan produk perawatan rongga mulut yang dipakai saat menyikat gigi. Salah satu pasta gigi yang cukup populer adalah pasta gigi pemutih. Bahan abrasif dan kimia dari pasta gigi pemutih dapat meningkatkan kekasaran permukaan bahan restorasi. Penelitian ini bertujuan untuk mengetahui perbedaan kekasaran permukaan *glass ionomer cement* yang disikat dengan pasta gigi pemutih dan tanpa pemutih. **Metode:** Penelitian ini menggunakan metode eksperimental laboratoris dengan *pre-post test design*. Jumlah sampel sebanyak 36 buah yang dibagi menjadi 2 kelompok. Kelompok I disikat dengan pasta gigi pemutih dan kelompok II dengan pasta gigi konvensional selama 2 menit. Nilai kekasaran permukaan sampel diuji dengan menggunakan *Roughness Tester Test*. **Hasil:** Data dianalisis menggunakan *independent t-test*, hasilnya menunjukkan terdapat perbedaan yang signifikan antara permukaan *glass ionomer cement* yang disikat dengan pasta gigi pemutih dan konvensional ($p=0,000$). **Kesimpulan:** Penyikatan *glass ionomer cement* dengan pasta gigi pemutih menghasilkan kekasaran lebih tinggi dibandingkan menyikat dengan pasta gigi konvensional.

Kata Kunci: *glass ionomer cement*, kekasaran permukaan, pasta gigi

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THE DIFFERENCES ON THE SURFACE ROUGHNESS OF GLASS IONOMER CEMENT AS THE RESULTS OF BRUSHING WITH WHITENING AND CONVENTIONAL TOOTHPASTE

x+68 pages, 6 pictures, 5 tables, 1 chart, 6 attachment files

ABSTRACT

Background: Glass ionomer cement is one of the restorative material used in dentistry. In the oral cavity, GIC was exposed to various substances, such as toothpaste, an oral care product used during toothbrushing. One of the popular toothpaste is whitening toothpaste. Abrasive and chemical agents in whitening toothpaste could increase the surface roughness of restorative materials. The aim of this study was to determine the differences on the surface roughness of glass ionomer cement that was brushed with whitening and conventional toothpaste.

Method: This study was done using experimental laboratory method with pre and post test design. There were 36 samples which were divided into 2 groups. The first group was brushed with whitening toothpaste and the second group was brushed with conventional toothpaste, each for 2 minutes. Surface roughness value of the specimens was measured by using Roughness Tester test. **Result:** The data was analyzed by using independent t-test and the result of this study showed there was a significant differences between the surface of glass ionomer cement which was brushed with whitening and conventional toothpaste ($p=0,000$).

Conclusion: Glass ionomer cement that was brushed with whitening toothpaste produced more roughness than conventional toothpaste.

Keywords: glass ionomer cement, surface roughness, toothpaste