

INTISARI

Giomer dan semen ionomer kaca merupakan material restorasi gigi yang sering digunakan untuk menumpat gigi anterior. Perendaman material restorasi dalam minuman berkarbonasi menyebabkan perubahan warna. Perubahan warna material restorasi gigi merupakan penyebab utama penggantian restorasi pada gigi anterior. Penelitian ini bertujuan untuk membandingkan perubahan warna antara giomer dan semen ionomer kaca yang direndam dalam minuman berkarbonasi.

Empat sampel semen ionomer kaca dan empat sampel giomer direndam dalam 30 ml minuman berkarbonasi pada suhu 37°C selama 7 hari. Sampel berbentuk silinder dengan diameter 10 mm dan tebal 2 mm. Sebelum dan sesudah perendaman, dilakukan pengambilan citra dengan kamera digital. Nilai L, a, dan b citra sampel diukur dengan adobe photoshop CS4. Nilai L, a dan b yang telah didapat digunakan untuk mencari nilai perubahan warna (ΔE) sampel. Nilai ΔE giomer dan ΔE semen ionomer kaca dianalisis menggunakan Mann-Whitney U.

Hasil penelitian menunjukkan rerata perubahan warna giomer yaitu $3,16 \pm 0,18475$ dan perubahan warna semen ionomer kaca yaitu $5,4450 \pm 0,90072$. Hasil uji Mann-Whitney U menunjukkan terdapat perbedaan perubahan warna yang signifikan ($p < 0.05$). Kesimpulan penelitian ini adalah terjadi perubahan warna pada giomer dan semen ionomer kaca setelah direndam dalam minuman berkarbonasi, serta giomer memiliki stabilitas warna yang lebih baik daripada semen ionomer kaca.

Kata Kunci: Giomer, Semen Ionomer Kaca, Perubahan Warna

ABSTRACT

Giomer and glass ionomer cement are dental restorative materials that frequently used by dentist to restore anterior tooth. Soaking these restorative materials in carbonated drink may affect the color of the materials. The color change of dental restorative materials is the main cause of anterior tooth restoration replacement. The aim of this study was to compare color changes between giomer and glass ionomer cement which were immersed in carbonated drinks.

Four sample of glass ionomer cements and giomers were immersed in 30 ml carbonated drinks at 37°C for 7 days. Each sample was cylindrical with 10 mm in diameter and 2 mm in thickness. Sample images were taken by a digital camera before and after the immersion. The L, a, and b values of the sample images were measured using adobe photoshop CS 4. The L, a, and b values that had been obtained were used to find the color change value (ΔE) of each sample. The ΔE value of giomers and the ΔE value of glass ionomer cements were analyzed by Mann-Whitney U test.

The results showed that the average color change of giomer was 3.16 ± 0.18475 and the average color change of glass ionomer cement was 5.4450 ± 0.90072 . The results of the Mann-Whitney U test showed there was significant statistically differences of color change between giomer and glass ionomer cement ($p < 0.05$). This study concluded that after immersed in carbonated drinks, there were differences in color change between giomer and glass ionomer cement, and giomer showed better color stability than glass ionomer cement.

Key words: Giomer, Glass Ionomer Cement, Color Change