Pengaruh Perendaman Resin Komposit Single-Shade dalam Larutan Teh Oolong dan Teh Hitam terhadap Perubahan Warna = The Effect of Oolong Tea and Black Tea Immersion on Color Change of Single-Shade Composite Resins

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Abstrak

Latar Belakang: Resin komposit single-shade merupakan resin komposit yang dapat menghasilkan warna menyerupai berbagai shade gigi tanpa tambahan pigmen. Resin komposit single-shade tetap memiliki potensi perubahan warna saat terpapar zat pewarna. Teh hitam dan oolong memiliki kadar tanin yang dapat mempengaruhi stabilitas warna resin komposit. Maka, dilakukan pengujian perubahan warna resin komposit single-shade setelah perendaman dalam larutan teh hitam dan oolong. Tujuan: Mengetahui perbedaan perubahan warna antara resin komposit single-shade yang direndam dalam larutan teh hitam dan oolong. Metode: Spesimen resin komposit single-shade dan konvensional nanohybrid (n = 42) dibagi ke dalam 6 kelompok, kemudian direndam dalam larutan teh hitam dan oolong selama 24 jam/hari dalam waktu 7 hari. Pengukuran perubahan warna dilakukan dengan colorimeter. Hasil: Perendaman dalam larutan teh hitam menghasilkan perubahan warna yang tidak sesuai pada resin komposit single-shade. Terdapat perbedaan perubahan warna signifikan antara resin komposit konvensional dalam kedua larutan teh, serta antara resin komposit single-shade dalam kedua larutan teh ($p < 0.05$). Kesimpulan: Perendaman resin komposit dalam teh hitam atau oolong menyebabkan perubahan warna resin komposit konvensional dan single-shade. Teh hitam menyebabkan perubahan warna lebih besar dibandingkan teh oolong pada kedua jenis resin komposit.

.....Single-shade composite resin is a composite resin that produces various teeth shades without additional pigments. Single-shade composite resin still has its color change potential when exposed to colorants. Black and oolong tea possess tannin contents that influence composite resin’s color stability. Therefore, single-shade resin composite’s color change was evaluated after its immersion in black and oolong tea solutions. Objective: To determine color change difference of single-shade composite resin after its immersion in black and oolong tea solutions. Methods: Single-shade and conventional nanohybrid composite resin specimens (n = 42) were divided into 6 groups, then immersed in black and oolong tea solutions for 24 hours/day for 7 days. Color change measurements were taken with a colorimeter. Results: Immersion in black tea resulted in unacceptable color change in single-shade composite resin. Significant difference in color change was found between conventional composite resin immersed in black and oolong tea, and between single-shade composite resin immersed in black and oolong tea ($p < 0.05$). Conclusions: Black and oolong tea immersion causes color change in conventional and single-shade composite resins. Black tea causes larger color change compared to oolong tea in both composite resins.