Pengaruh Penambahan Jus Buah Tomat Pada Pembuatan Material Home Bleaching Hidrogen Peroksida 3% Terhadap Perubahan Warna Gigi = Effect of Tomato Juice in Hydrogen Peroxide 3% Home Bleaching Material on Tooth Discoloration

Salsabilla Syafa Marwa Laksmana, author

Abstrak

Latar Belakang: Perawatan untuk perubahan warna gigi yang banyak dipilih masyarakat saat ini ialah tooth bleaching atau pemutihan gigi. Teknik home bleaching kerap menjadi pilihan masyarakat karena lebih murah serta tidak menimbulkan efek hipersensitivitas yang tinggi. Penggunaan bahan alami seperti buah-buahan dapat dimanfaatkan pada bidang kesehatan dan kecantikan termasuk untuk tooth bleaching. Buah tomat dapat dimanfaatkan sebagai agen pemutih tambahan untuk produk home bleaching karena mengandung agen pengoksidasi yang dapat mempercepat proses pemutihan gigi. Tujuan: Membuat material home bleaching hidrogen peroksida 3% dengan penambahan jus buah tomat dan mengetahui perbedaan warna gigi setelah aplikasi bahan bleaching. Metode: Dua puluh empat gigi premolar pasca ekstrasi diberi paparan bahan home bleaching. Sampel dibagi menjadi 4 kelompok dengan masing-masing terdiri dari 6 sampel. Kelompok A dipaparkan bahan bleaching hidrogen peroksida 3%, kelompok B hidrogen peroksida 3% dengan tambahan jus tomat 30%, kelompok C hidrogen peroksida 3% dengan tambahan jus tomat 75%, dan kelompok D dipaparkan bahan home bleaching komersial opalescence whitening gel PF 10%. Setiap kelompok dipaparkan 8 jam/hari selama 7 hari. Perubahan warna diukur sebelum dan sesudah paparan menggunakan kolorimeter dengan metode CIEL*a*b. Analisis data dengan uji statistik One-Way ANOVA dan Post Hoc Bonferroni. Hasil: Penelitian menunjukkan bahwa keempat kelompok dapat memutihkan gigi. Hasil perubahan warna âE*ab kelompok dengan hidrogen peroksida 3% 5,89, hasil âE*ab kelompok hidrogen peroksida 3% dengan tambahan jus tomat 30% 27,93, hasil âE*ab kelompok hidrogen peroksida 3% dengan tambahan jus tomat 75% 23,27, hasil âE*ab kelompok opalescence whitening gel PF 10% 10,67. Hasil âE*ab penambahan jus tomat lebih tinggi dibandingkan bahan hidrogen peroksida 3% dan bahan home bleaching komersial opalescence whitening gel PF 10%. Hasil âE*ab setiap kelompok terdapat perbedaan bermakna (p<0,05). Kesimpulan: Terdapat pengaruh penambahan jus buah tomat pada bahan bleaching hidrogen peroksida 3% terhadap perubahan warna gigi yang lebih cerah.
.....Background: Tooth bleaching is one of the treatment that many people choose in the management for tooth discoloration. Home bleaching technique often chosen because cheaper and do not cause high hypersensitivity effects. The use of natural ingredients such as fruits can be utilized in the health and beauty sector, including for tooth bleaching. Fruits, such as tomato can be used as an additional whitening agent for home bleaching products because it contains an oxidizing agent which can speed up the teeth whitening process. Objective: To make 3% hydrogen peroxide bleaching at home with the addition of tomato juice and find the difference in tooth colour after application of the bleaching agent. Methods: Twenty four post-extraction premolars were exposed to home bleaching agents. The sample was divided into 4 groups with 6 samples each. Group A was exposed to 3% hydrogen peroxide bleaching agent, group B was exposed to 3% hydrogen peroxide with the addition of 30% tomato juice, group C was exposed to 3% hydrogen peroxide with the addition of 75% tomato juice, and group D was exposed to commercial home bleaching agent

opalescence whitening gel PF 10% . Each group was exposed 8 hours/day for 7 days. Colour changes were measured before and after exposure using a colorimeter with the CIEL*a*b method. Data analysis with One-Way ANOVA and Post Hoc Bonferroni statistical tests. Results: Research shows that all four groups can whiten teeth. Color change results in hydrogen peroksida 3% âE*ab 5,89, âE*ab % hydrogen peroxide with the addition of 30% tomato juice 27,93, âE*ab % hydrogen peroxide with the addition of 75% tomato juice 23,27, and âE*ab opalescence whitening gel PF 10% 10,67. The results of the discoloration of the âE*ab group with 3% hydrogen peroxide and the addition of tomato juice were higher than those of 3% hydrogen peroxide without addition of tomato juice and exposed to commercial home bleaching agents, opalescence whitening gel PF 10%. Color change results between groups significantly different ($p<0,05$). Conclusion: There is an effect of adding tomato juice to 3% hydrogen peroxide bleaching agent on teeth discoloration that is brighter.