Perubahan warna white spot paska debonding setelah aplikasi fluor dan casein phospho peptide-amorphous calcium phosphate (CPP-ACP) : Penelitian In-Vitro = Comparison between fluoride and casein phospho peptide amorphous calcium phosphate (CPP-ACP) application on colour change of post debonding white spot : An In-Vitro study

Putri Arifiani, author

Abstrak

Latar Belakang: White spot merupakan salah satu efek samping perawatan ortodonti dengan piranti cekat. Keberadaan lesi ini setelah debonding menimbulkan masalah estetik.
Tujuan: Penelitian ini bertujuan untuk menilai perubahan warna white spot paska debonding setelah aplikasi fluor dan CPP-ACP.
Metode: Pada penelitian ini digunakan empat puluh dua gigi premolar atas yang telah diekstraksi guna perawatan ortodonti, lalu dipasang braket, kemudian spesimen direndam dalam larutan demineralisasi untuk membentuk lesi white spot artifisial, dan selanjutnya braket dilepas. Sampel dibagi menjadi 3 kelompok (n= 14) secara acak untuk diberi perlakuan: (1) Aplikasi gel 1.23% APF; (2) Aplikasi pasta 10% CPP-ACP, dan (3) kontrol. Pengukuran perubahan warna dengan menggunakan spektrofotometer dilakukan pada 3 waktu yaitu pada sebelum dan setelah white spot artifisial dibentuk, dan setelah white spot diberi perlakuan.
Hasil: Hasil penelitian ini memperlihatkan bahwa terdapat perbedaaan warna white spot yang bermakna secara statistik sesudah perlakuan pada seluruh kelompok sampel. Tidak terdapat perbedaan bermakna secara statistik pada banyaknya perubahan warna white spot setelah aplikasi gel 1.23% APF dan pasta 10% CPP-ACP.
Simpulan: CPP-ACP memberikan hasil perubahan warna white spot yang lebih baik secara visual, namun tidak berbeda bermakna secara statistik dengan fluor.
<hr><i>Background: White spot are common side effect in orthodontic treatment. The presence of the lesions after the removal of orthodontic aplliances still remains an esthetic problem.
Objective: The aim of this study was to quantify color changes in post-debonding white spot lesions after fluor and CPP-ACP aplication.
Methods: Forty-two upper premolars which were extracted for orthodontic reasons, were selected as the sample teeth. Universal premolar brackets were bonded to the facial surfaces of the sample and the sample were exposed to demineralization solution to create artificial white spot lesions, and then brackets were debonded. The sample were randomly allocated into 1 of 3 groups (n= 14) and were assigned to this following treatment: (1) 1.23% APF gel; (2) 10% CPP-ACP paste, and (3) control group. Then all groups were assigned to pH cycling for 14 days. Color change measurements were determined using a spectrophotometer 3 times: before and after production of the artificial white spot lesions, and after the artificial white spot lesions were treated.
Results: This study showed that there was significant difference in the color of the artificial white spot lesions after treatment in all groups. There was not significant difference in the result of color changes between after aplication with 1.23% APF gel and 10% CPP-ACP paste.
Conclusions: CPP-ACP were giving better result in changing the color of white spot lesions, but it was not

significantly different from the fluoride.</i>