Perbandingan kebocoran tepi dinding gingiva tumpatan resin komposit teknik cocured dan precured dengan liner flowable konvensional dan modifikasi = A comparison of microleakage gingival wall in composite restoration using cocured and precured technique with conventional and modification liner

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Abstrak

Latar Belakang: Kebocoran mikro dinding gingiva restorasi resin komposit proksimal sering terjadi. Penelitian ini bertujuan untuk menganalisis perbedaan tingkat kebocoran mikro dinding gingiva antara RK flowable konvensional dan modifikasi dengan teknik precured dan cocured.
Metode: 120 kavitas kelas II Black gigi premolar RA dibagi menjadi empat kelompok. Setelah dipreparasi berbentuk boks, kelompok 1 direstorasi dengan teknik precured (liner konvensional dan modifikasi), kelompok 2 dengan teknik cocured (liner konvensional dan modifikasi), kelompok 3 dengan liner RK flowable konvensional (teknik precured & cocured),dan kelompok 4 dengan liner RK flowable modifikasi (teknik precured & cocured). Pengukuran penetrasi zat warna biru metilen 1% dilakukan setelah thermocycling. Gigi kemudian dibelah mesiodistal dan diamati menggunakan mikroskop stereo 2 pembesaran 25x. Analisis data dengan uji Kolmogorov-Smirnov.
Hasil: Terdapat perbedaan bermakna antarkelompok teknik satu dan dua dengan tingkat kebocoran teknik cocured lebih rendah (p= 0.047) dan tidak terdapat perbedaan bermakna antara kelompok tiga dan empat (p= 0.985).
Kesimpulan: Teknik cocured memiliki tingkat kebocoran lebih rendah dibandingkan dengan teknik precured. Namun tidak terdapat perbedaan bermakna antara kelompok dengan liner RK flowable konvensional dan modifikasi.
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Background: Microleakage of composite restoration in proximal often occurs on gingival wall. The purpose of this study to analyze the microleakage of gingival wall in composite restoration using technique cocured and precured with conventional and modification liner.
Methods: Standardized class II were prepared on 60 extracted human upper premolar mesial and distal into 4 groups. Within a box-like cavities, the first group is restored with precured technique (conventional & modification liner), second group is restored with cocured technique (conventional & modification liner), third group is restored with conventional liner (precured & cocured technique), and fourth group is restored with modification liner (precured & cocured technique). The specimens were subjected to thermocycling, followed by immersion in 1% methylene blue dye for 24 hours. The teeth were sectioned mesio-distally and evaluated for microleakage under 25x magnification steremicroscope and score in ordinal scale (0-3). Statistical analysis was performed with the Kolmogorov-Smirnov test.
Results: There was significant difference between first and second group, which is microleakage in second group lower than first (p= 0.047). There was no significant difference between third group and fourth (p= 0.985).
Conclusion: Cocured technique have lower microleakage than precured technique. But there is no

significance difference between conventional liner group and modification liner.