

Perbedaan kebocoran tepi restorasi resin komposit dengan teknik Bulk Fill dan Inkremental Oblik pada kavitas kelas i dengan liner = Microleakage at class i cavity margin with Bulk Fill composite resin and Oblique Incremental technique with liner

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Abstrak

[ABSTRAK

Kavitas kelas I sering ditemui pada permukaan gigi molar karena mempunyai bentuk anatomi pit dan fisur yang dalam sehingga sering menyebabkan sisa makanan tertinggal yang nantinya dapat menyebabkan karies gigi. Bahan restorasi yang sesuai untuk penumpatan kavitas kelas I adalah resin komposit. Namun resin komposit memiliki kelemahan yaitu mengalami penyusutan polimerisasi yang menyebabkan kebocoran tepi. Kavitas kelas I juga memiliki c-factor terbesar dibandingkan kavitas lainnya yang dapat menyebabkan kebocoran, sehingga untuk mengatasinya dapat menggunakan liner SIKMR serta teknik Bulk-fill dan inkremental oblik. Tujuan dari penelitian ini adalah menganalisis kebocoran tepi restorasi resin komposit teknik Bulk-fill dengan liner dan teknik inkremental dengan liner. Sebanyak 70 sampel dipreparasi dibagian bukal dengan ukuran 3 mm x 3 mm, terdiri dari 10 sampel kelompok Bulk-fill, 30 sampel kelompok Bulk-fill dengan liner SIKMR dan 30 sampel kelompok inkremental oblik. dengan liner SIKMR direndam dalam air destilasi selama 24 jam. Kemudian dilakukan Thermocycling 250x, suhu 5-550C dilanjutkan dengan aplikasi cat kuku dan rendam dalam metilen biru selama 24 jam. Sampel dibelah dalam arah buko-palatal dan dilakukan pengamatan menggunakan mikroskop stereo kemudian hasilnya diuji statistik menggunakan uji Chi-Square. Hasil uji statistik menunjukkan adanya perbedaan yang bermakna diantara semua kelompok dengan nilai signifikansi $p \leq 0,05$. Inkremental oblik dengan liner menunjukkan tingkat kebocoran lebih rendah dibandingkan Bulk-fill dengan liner.

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ABSTRACT

Cavity class I often found on the surface of the molars because they have the anatomical shape of pits and fissures are deep that often cause food scraps left behind which can later lead to dental caries. Restorative material suitable for cavities penumpatan class I is the composite resin. However, a drawback of composite resin namely polymerization shrinkage which causes microleakage. Cavity class I also have a c-factor compared to most other cavity which can cause leaks, so to overcome SIKMR can use the liner as well as bulk-fill technique and incremental oblique. The purpose of this study was to analyze the microleakage of composite resin restorations Bulk-fill technique and oblique incremental techniques with liner. A total of 70 samples were prepared on the buccal with the size of 3 mm x 3 mm, consisting of 10 groups of Bulk-fill samples, 30 samples of Bulk-fill groups with liner SIKMR and oblique incremental groups of 30 samples. with liner SIKMR soaked in distilled water for 24 hours. Then do the Thermocycling 250X, 5-550 C temperature followed by application of nail polish and soak in methylene blue for 24 h. Samples were cleaved in buko-palatal direction and made observations using a stereo microscope and the result was tested statistically using Chi-Square. Statistical analysis showed significant differences among all groups with significant value $p \leq 0,05$. Incremental oblique with liner show a lower leakage rate than the Bulk-fill

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