Perbandingan kebocoran mikro resin komposit packable dengan flowable kandungan filer tinggi pada restorasi kelas I = Microleakage comparison between packable composite and high filler flowable composite in class I restoration

Talia Andam Sadikin, author

Abstrak

Latar Belakang: Restorasi resin komposit masih memiliki kekurangan, yaitu terjadinya kebocoran mikro akibat kontraksi saat polimerisasi sehingga dapat menyebabkan kegagalan restorasi. Penelitian ini bertujuan untuk menganalisis perbedaan tingkat kebocoran mikro dinding restorasi kelas I antara RK packable (RP) dan RK flowable dengan kandungan filer tinggi (RF).
Metode: Kavitas kelas I dipreparasi pada tiga puluh dua gigi premolar kemudian dibagi menjadi dua kelompok. Kelompok pertama ditumpat dengan RP, kelompok kedua dengan RF, keduanya ditumpat secara inkremental. Selanjutnya spesimen dilakukan uji thermocycling dan diikuti perendaman dalam biru metilen 1% selama 24 jam. Gigi kemudian dibelah bukolingual dan diamati menggunakan mikroskop stereo pembesaran 14x dan dinilai dalam skala ordinal (0-4). Analisis statistik dilakukan dengan uji Kolmogorov-Smirnov.
Hasil: Tidak terdapat perbedaan yang signifikan antara Kelompok RP dan RF (p=0,699).
Kesimpulan: Tidak terdapat perbedaan bermakna antara kebocoran mikro menggunakan RP maupun RF yang ditumpat secara inkremental. Namun secara substansi, RF menunjukkan kebocoran mikro lebih sedikit dibandingkan dengan RP.
.....Background: Composite resins undergo contraction during polymerization which may result in microleakage and leads to restoration failure. The purpose of this study is to analyze the microleakage of Class I restorations that were filled with packable composite (RP) and high filler flowable composite (RF) incrementally.
Methods: Standardized Class-I cavities were prepared on 32 extracted human premolars and randomly assigned into two groups. The first group were filled with RP and the second group were filled with RF. The specimens were subjected to thermocycling, followed by immersion in 1% methylene blue dye for 24 hours. The teeth were sectioned bucco-ligually and evaluated for microleakage under 14x magnification stereomicroscope and scored in ordinal scale (0-4). Statistical analysis was performed with the Kolmogorov-Smirnov test.
Results: There was no significant difference between group RP and RF (p=0.699).
Conclusion: There is no significance difference between microleakage by RP and RF. But substantially, RF provided less microleakage than RP.