Evaluasi kebocoran mikro pada tumpatan glass ionomer cement konvensional dan resin-modified glass ionomer cement kavitas site 1-size 2 gigi premolar

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Abstrak

Latar Belakang. Kebocoran mikro masih menjadi masalah utama dalam bidang kedokteran gigi karena dapat menyebabkan bakteri dan cairan mulut masuk diantara dinding kavitas dan tumpatan. Tujuan. Mengevaluasi kebocoran mikro pada tumpatan GIC Konvensional
dan RMGIC.

Metode. Gigi premolar dipreparasi pada bagian oklusal dengan ukuran 3 x 3 x 2,5 mm, kemudian ditumpat dengan GIC Fuji IX, Fuji II dan Fuji II LC. Kemudian, spesimen direndam dalam akuabides, setelah 24 jam direndam dalam larutan pewarna methylene blue 1%, kemudian dipotong melintang arah bukolingual dan diamati di bawah stereomikroskop.

Hasil Penelitian. Kebocoran mikro paling besar terjadi pada GIC Fuji IX, diikuti dengan Fuji II dan Fuji II LC.

Kesimpulan. Terdapat kebocoran mikro pada tumpatan GIC Konvensional dan RMGIC, dimana derajat kebocoran mikro pada GIC Konvensional lebih besar dibandingkan RMGIC.
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Background. Microleakage around restoration is still a major problem in clinical dentistry, which can cause the penetration of bacteria and oral fluids between the cavity wall and the restoration. Objectives. To evaluate the microleakage of Conventional GIC and RMGIC restoration.

Methods. The premolars were prepared oclusally to a size of 3 x 3 x 2,5 mm dimensions, and were filled with GIC Fuji IX, Fuji II, and Fuji II LC. Then, all specimens were stored in aquabidest, after 24 hours all specimens were immersed in 1 % methylene blue dye, then were sectioned in a buccolingual direction, and inspected under stereomicroscope.

Results. GIC Fuji IX showed maximum leakage followed by Fuji II and Fuji II LC.

Conclusions. The microleakage was evident in Conventional GIC and RMGIC restoration, where the microleakage degree in Conventional GIC were greater than RMGIC.