

Perbandingan Kerapatan Pengisian Gutaperca Berlapis Resin dan Gutaperca Konvensional Menggunakan Siler Resin Metakrilat Pada Sepertiga Apeks = The Comparison Sealability of Root Canal Obturation using Resin Coated Guttapercha and Conventional Guttapercha with Methacrylate Resin-Based Root Canal Sealer in One Third Apical Root Canal

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Abstrak

Latar Belakang: Pengisian dengan kon gutaperca berlapis resin (GBR) dan siler resin metakrilat menciptakan suatu sistem monoblok tersier. Tujuan: menganalisis perbandingan kerapatan antara pengisian GBR dan gutaperca konvensional (GK) dengan siler resin metakrilat di daerah sepertiga apeks. Metode: Tiga puluh dua gigi insisif bawah, dibagi dua kelompok sama besar, yaitu kelompok GBR dan GK dengan masing-masing kelompok menggunakan siler resin metakrilat. Setelah pengisian saluran akar dengan teknik single-cone, sampel diinkubasi (37°C, 24 jam), kemudian dibelah dua secara vertikal. Dilakukan pemeriksaan kerapatan sepertiga apeks berdasarkan celah mikro yang ada pada daerah 5mm dari apeks menggunakan SEM dan diberi skor. Analisis data menggunakan uji Kolmogorov-Smirnov. Hasil: Skor 0 terbanyak pada GBR 43.8%, skor 1 terbanyak pada GK 81.3% (165), skor 2 0% dan skor 3 terbanyak pada GBR 12.5%. Kesimpulan: Kerapatan hasil pengisian dengan kon gutaperca berlapis dibanding gutaperca konvensional dengan masing-masing kelompok menggunakan siler resin metakrilat pada sepertiga apeks tidak ada perbedaan bermakna walaupun secara substansi jumlah celah mikro pada kelompok gutaperca berlapis lebih sedikit di daerah sepertiga apeks

.....Background: Resin-coated guttapercha as a root canal obturation material is the system of tertiary monoblock. Purpose: to compare sealability of obturation using methacrylate resin-based root canal sealer between GBR dan GK group. Methods: Thirty two human lower insisive was used as specimen. All specimen was prepared using REVO-S and divided randomly into two groups. First group, GBK was obturated with resin-coated guttapercha and methacrylate resin-based root canal sealer; while GK group was obturated with conventional guttapercha with the same sealer. After obturation, the specimens were incubated (37°C, 24 h), then the specimens was cut vertically. The gap existence was measured using SEM and given score 0-3. The results were statistically analyzed with Kolmogorov Smirnov test.

Results: The largest proportion distribution in GBR group was score 0 (43.8%), whilst the largest proportion distribution in GK group was score 1 (81.3%), both these groups has no score 2, and the largest proportion distribution in GBR was score 3 (12.5%) Conclusion: Resin-coated guttapercha as an obturation material had insignificance difference statistically than conventional guttapercha of sealing ability, despite resin-coated guttapercha showed better sealing ability substantially.