

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

Rani Isfandria, author

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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 (370C, 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 (370C, 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.