

Abstract

Apical Leakage Comparison of Lateral Compaction Technique Obturated With Standardized .02 Taper and .04 Taper Master Gutta-Percha Cones

Mangmee P, Malholtra A, Sitthikriwong T, Pattraporn wirod W, Runghirungkul S. Faculty of Dental Medicine, Rangsit University, Pathumthani, Thailand

The objective of root canal obturation is to seal the entire root canal systems. Non standardized gutta percha cone, which has more mass than standardized gutta percha cone, has been developed to increase the filling mass and reduce the amount of sealer between each gutta percha cone. The purpose of this in vitro study was to compare the apical leakage between root canal obturated with standardized and non-standardized gutta percha cone.

Methods

Mesial root of 40 mandibular molars were instrumented with rotary NiTi file and obturated with lateral compaction using 2 type of gutta-percha cones. Thirty teeth were divided into two experimental groups and ten teeth were used as positive and negative control. Mesiolingual canal was obturated with standardized gutta-percha cone. Mesiobuccal canal was obturated with non-standardized gutta-percha cone. Positive control tooth was obturated without sealer. Negative control tooth was obturated and sealed externally with nail polish. All teeth were immersed in 2% methylene blue dye for 7 days and longitudinally section in bucco-lingual direction. Depth of dye penetration was measured.

Results

Data was analyzed using T-Test independent. Dye penetration in canal obturated with standardized .02 taper and .04 taper gutta-percha cones showed no significantly different ($p > 0.05$).

Conclusion

Root canal obturated with lateral compaction technique using standardized .02 taper gutta-percha cone has no different in apical leakage when compare with standardized greater taper cone of .04.