

## عنوان مقاله:

The Effect of Thickness on Sealing Ability of Calcium Enriched Cement as a Coronal Seal Barrier

## محل انتشار:

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## خلاصه مقاله:

**Abstract Introduction:** Thickness of a coronal seal barrier is an important factor for preventing microleakage. The aim of this in vitro study was to compare the sealing ability of two different thicknesses of calcium Enriched Mixture (CEM) cement as a coronal seal barrier. **Methods:** A total of 40 canals of extracted maxillary central incisors were instrumented and obturated using lateral compaction technique. The teeth were randomly divided into two experimental (N=15) and two control groups (N=5). For experimental groups, the obturation material was removed up to the experimental depths (2 and 3 mm) and were sealed with CEM. Sealing ability was evaluated by dye penetration method using pelikan ink and a stereomicroscope at x10 magnification and 0.01 mm accuracy. Data was analyzed using T-test and  $P < 0.05$ . **Results:** The mean linear dye microleakage for the two thicknesses of CEM cement groups (2mm and 3mm) were 0.930 and 0.67 mm respectively. There was no statistically significant difference between the two groups ( $p < 0.088$ ). **Conclusion:** under the condition of this in vitro study, coronal microleakage in 2mm thickness of CEM cement had no statistically significant difference with 3 mm thickness of the material.

## کلمات کلیدی:

Sealing ability, coronal seal, CEM

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