Original article

Comparison of Bacterial Microleakage between MTA and CEM in Furcal Perforation Seal in Primary Peeth

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Abstract

Background and aims: Sealing the furcal perforation is an important factor to reduce inflammation and perform healing. Selecting the appropriate material to repair the defect is an important concern. Among the various available materials, MTA and CEM showed better properties to achieve this purpose. The purpose of this study was to compare the sealing ability of these materials by bacterial penetration method in furcal perforation repair of primary molars.

Materials and Method: Sixty five primary molars were selected for this in vitro study. The teeth were divided in to three groups including two experimental group (n=30) and one control group (n=5). Five teeth which were existed in control group, randomly divided in to three negative control teeth and two positive control teeth. The perforation defects at the size of 3×4 mm2 were prepared on the furcation of two experimental group and two samples of positive control group. In group 1 the perforations were sealed with MTA and in group 2 the perforations were sealed with CEM. Then samples were undergone bacterial penetration test. Survival estimates were calculated using the Kaplan-Meier method and compared with Log- rank test between two experimental groups.

Results: There was no statistically significant difference between MTA and CEM in bacterial penetration as a reparative material for furcal perforation repairs (p=0.204).

Conclusions: Based on the results of this study, MTA and CEM have an equal sealing ability by using bacterial penetration method.

Key words: MTA, CEM, bacterial penetration method.

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