EFFECT OF THE TAPER OF GUTTA-PERCHA CONES AND THE TYPE OF SEALERS ON THE PUSH-OUT BOND STRENGTH

INTRODUCTION

This section gives an overview of the research. Start with the background: What are you studying and why? What is the importance of the research to the field or specific industry, and what can it contribute to the existing literature? Be mindful of the space of the poster. Include the important information, but be as straightforward as possible.

DATA ANALYSIS

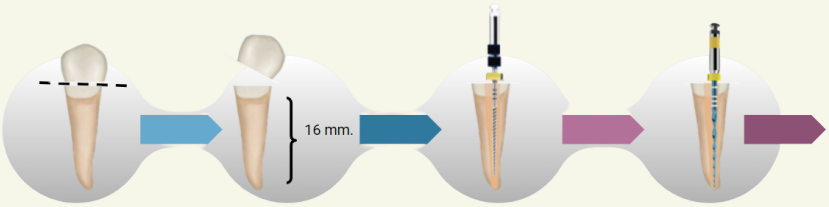
The relevance of the taper of gutta-percha cones and the type of sealers on the push-out bond strength was determined using one-way analysis of variance and the post hoc tests to determine the presence of a significant difference among the groups. The significance level was set at p # 0.05.

MATERIAL AND METHOD

Intact human mandibular premolars (n = 120) that were freshly extracted for orthodontic reasons were collected, clean, and stored in distilled water. The crowns were decoronated to achieve a standard length of 13 mm for each tooth (from the upper cusp margin of the crown to the apex) using a diamond disk on a straight handpiece. After preparing a straight access cavity, the palatal canal was negotiated, establishing a glide path, and working length determination by subtracting 1 mm from the full length, and only straight canals were included in the study. The initial size of the canal at the entire working length was verified by size 20. The palatal canal of the teeth was prepared with a series of Reciproc blue up to size R50. 2 ml of 2.5% sodium hypochlorite solution (NaOCl) was used to irrigate the root canal at each file change delivered by side-vent needle tip gauge 27 inserted 2 mm short of working length. The final rinse protocol used 2 ml of 17% EDTA for one minute per root canal followed by flushing with 5 ml of normal saline. Then the root canal was dried with a piece of absorbent paper point. The teeth were then randomly divided into four groups according to the root canal sealer types and taper of gutta-percha cones.

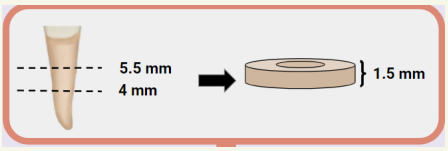
OBJECTIVE

The purpose of this experiment was to compare the push out bond strength of root canal filling with two calcium silicate based sealers by two obturation techniques.



SAMPLE GROUPS

- **Group** 1 : iRoot SP with gutta-percha cone taper
- **Group 2** : iRoot SP with Matched-taper gutta-percha cone size R50
- **Group 3** : Nishika Canal Sealer BG with Gutta-percha cone taper 02
- **Group 4** : Nishika Canal Sealer BG with Matched-taper gutta-percha cone size R50



RESULT

Push-out bond strength can indicate the strength of the sealer. In comparison between 2 obturation techniques, iRoot SP is stronger than Nishika canal BG. In the experiment it was also possible to tell that the standard taper 02 filling showed a higher push-out bond strength than the matched-taper size R50

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