Influence of a new filling paste for primary teeth on the mechanical properties of root dentin

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INTRODUCTION

The aim of the present study is to evaluate the influence of a new filling paste for primary teeth on the mechanical properties of root dentin.

METHODS & MATERIAL

One hundred and thirty bovine teeth will be obtained from animals slaughtered for commercial purposes, with 50 used for microhardness evaluation, 15 for flexural strength, 15 for cohesive strength and 50 for fracture strength.

The roots will be prepared according to the characteristics and standards needed to carry out each proposed test. Samples will be randomly distributed into 5 groups, according to the material used for filling deciduous teeth:

G1 - saline solution (control)

G2 - calcium hydroxide paste

G3 - zinc oxide and eugenol paste

G4 - iodine-formed paste

G5 - Experimental Paste

RESULTS

The results obtained will be statistically analyzed with a specific test for each of the experiments. The influence of the proposed treatments on the microhardness of root dentin will be evaluated using a Vickers microhardness tester (Fig.01) and on the other mechanical properties of root dentin using a universal testing machine (Fig.02 A-C). The results obtained will be statistically analyzed with a specific test for each of the experiments.

Illustrative images made by the research group.

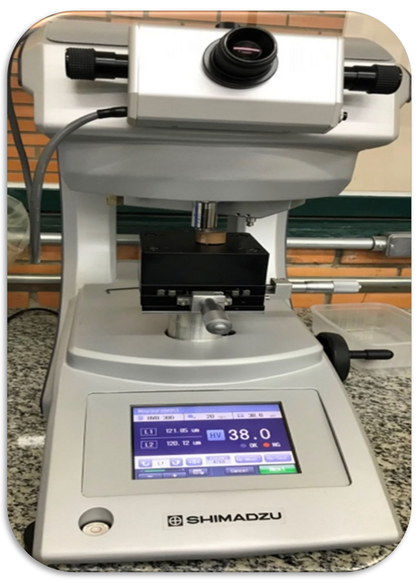

Fig.01

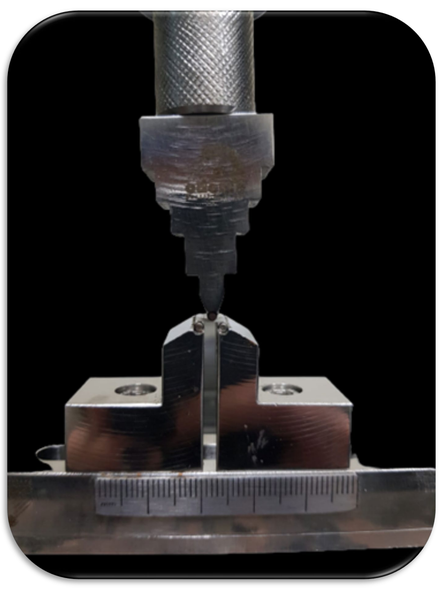

Fig.02A

Fig.02B

Fig.02C

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