

Histo pathological evaluation of response of primary teeth pulp after direct pulp capping with Bioactive Glass and Mineral Trioxide Aggregate

Abstract

Background and Aim: Direct pulp capping is a conservative vital pulp therapy which that has some limitations in primary dentition. The aim of this study was to evaluate pulpal response of primary teeth after direct pulp capping with two biocompatible materials, MTA and BAG.

Materials and Methods: A total teeth of 22 healthy primary canines which were to be extracted for orthodontic reasons, were selected. The teeth were divided into 2 groups, each with 11 teeth and were treated with direct pulp capping. Then the exposure sites were randomly capped with MTA or BAG in the two groups. After 2 months the teeth were extracted and prepared for histopathologic evaluation. Data was analyzed by Fisher's exact test .

Results: In the BAG group, inflammation was seen in 3 cases and internal resorption and abscesses were not seen in any of the cases. In the MTA group, inflammation was seen in 3 cases and internal resorption and abscesses were not seen in any of the cases. Dentin bridge formation was seen in one sample in the BAG group.

Conclusion: Based on the results of this study MTA and BAG can be used for direct pulp capping in primary teeth.

Key Words: MTA, BAG, Direct pulp capping, Histological evaluation