

ENDODONTIC RETREATMENT OF TWO DIFFERENT THERMAFIL TECHNIQUES (A COMPARATIVE STUDY)

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ABSTRACT

The purpose of this study was to evaluate the canal wall cleanliness in case of retreatment using chloroform in teeth obturated with two different Thermafil techniques. Twenty-four extracted human teeth were instrumented and divided into two groups: group A, teeth obturated with Thermafil technique with plastic carrier and, group B, with the Thermafil Plus technique. Retreatment of all teeth was done. The retreatment time and amount of chloroform used during retreatment were recorded. The teeth were then split longitudinally. The ratio of the remaining filling materials to the root canal area were measured in the whole canal, coronal, middle and apical thirds by using a computerized image analysis system. Data were then statistically analyzed. The results showed no statistically significant difference in the remaining filling materials between the two techniques. Also, the amount of chloroform required for retreatment was not statistically significant. However, there was a statistically significant difference in the retreatment time of both techniques.

Under the conditions of this study Thermafil plus technique was faster in retreatment when compared to old Thermafil technique.

INTRODUCTION :

Retreatment of endodontically failed teeth is a common procedure whenever inadequate preparation and obturation of root canal system or coronal leakage is suspected as a cause of the failure. The removal of gutta-percha from inadequately prepared root canals is a major part of most root canal retreatments. It is important to remove as much obturation materials as possible in order to uncover remnants of necrotic tissue or bacteria which may be responsible for the endodontic failure.

Thermafil is an endodontic obturation material consisting of warmed alpha phase gutta-percha which is carried into the root canal using a solid central core. According to a nationwide American survey of randomly selected endodontists, Thermafil system was regarded the most popular system

among the newly introduced canal filling materials that use a solid core with a gutta-percha coating. The survey also indicated that this material is almost exclusively used by general practitioners.⁽¹⁾ The popularity of this technique has raised concerns regarding its retreatability because the solid central core surrounded by the gutta-percha becomes a permanent part of the filling.

The removal of Thermafil carrier is not always an easy procedure, since a number of authors have reported difficulties in removing the plastic carriers. In most of these studies, the protruded carriers had been pulled out with the help of pliers after softening the gutta-percha with chloroform. A number of carriers broke off during removal and could not be retrieved.^(2,3)

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