Medical and Research Publications
International Open Access

**Editorial Article** **Journal of MAR Dental Sciences (Volume 3 Issue 4)**

# Rehabilitation of Endodontically treated Teeth (ETT) Revisited

Dr. Snigdho Das ( MDS,Conservative Dentistry & Endodontics)

**Corresponding Author: Dr. Snigdho Das,**



**Received Date: September 17, 2021**

**Published date: October 01, 2021**

**"Loss of even a part of a human tooth should be regarded as a serious injury, never to be considered lightly, and the tooth is certainly worthy of the most careful restoration."**

***-Dr.Miles Markley***

The last few decades have witnessed a paradigm shift towards the preservation of tooth structure,especially after the completion of the root canal treatment. Current literature is of the view that periapical healing is greatly influenced by a collaboration of a good endodontic treatment followed by an appropriate and an early post-endodontic restoration and the latter has a greater impact on the maintenance of periapical health following the root canal treatment.

A common misconception amongst practitioners is that a full-coverage restoration is mandatory to restore endodontically treated teeth(ETT). This belief is driven by the concept that an ETT is more brittle than its vital counterpart due to loss of dentinal moisture. Furthermore, it was alleged that the irrigants and medicaments used as part of the treatment procedure enfeebled the dentin by decreasing its microhardness, all leading to the weakening of the tooth structure, thus propagating the complete coverage of the treated tooth with a crown. All these misapprehensions have been busted by current prevailing research as non-significant differences were found in the biomechanical behavior between a vital tooth and a non-vital tooth receiving an early coronal seal.

Vast advances in adhesive dentistry have opened new vistas in the restoration of endodontically treated teeth enabling multiple treatment options in the restoration of ETT, without further loss of tooth structure to receive a crown. Ceramic with its recent advancements has become popular because of its strength and improved esthetics and is evolving as an acceptable alternative to amalgam restorations.
The current recommendation suggests restoring an anterior ETT with minimal access with a composite restoration. Negligible discoloration can be treated by bleaching or placement of ceramic veneers or a combination of both. A full crown is indicated only when there is a significant loss of tooth structure or due to esthetic requirements(discoloration is resistant to bleaching).On the other hand, it is always advisable to restore a premolar tooth irrespective of the size of the access cavity with a complete cuspal coverage as it is prone to increased functional and lateral stresses and might lead to catastrophic debonding failures, owing to the presence of less surface area for bonding. When it comes to the restoration of a root-filled molar tooth, options are manifold. An Endocrown has been recently gaining importance as an alternative for restoring a molar tooth with large coronal destruction. It is a concept propagated by Bindl and Mormonn in the year 1999 and is defined as an all-ceramic,bonded restoration with a supra-cervical butt-joint, including an intra-coronal extension into the pulp chamber of an ETT. These restorations have seemed to have shown similar survival rates compared to a full crown if a proper bonding protocol is followed. Other than this, an onlay should be preferred as a viable option for cuspal coverage of a root-filled molar than a full crown, whenever warranted, as it helps to retain the residual sound tooth structure. A direct composite restoration is judicious if the access cavity is of Class I type, with adequate residual wall thickness and in absence of any cracks.

A post is indicated in case of considerable tooth structure loss, especially in anterior and premolar teeth. It is always desirable to provide a circumferential ferrule of a minimum 2 mm thickness and height. A post should be always fortified with an appropriate core to compensate for the additional tooth structure loss owing to the meticulous preparation for the post placement. Although current literature is controversial regarding the flexibility (fiber or metal) of the posts and its correlation with the survival rates of ETT, it is always advisable to place a post passively without any additional “post space” preparation. It is also imperative to follow the designated bonding protocol when an adhesive post is chosen.
It is always prudent for a clinician to adapt to the changing concepts in the dental world and modify the treatment protocols accordingly. The recent advancements in adhesive dentistry with improved fabrication procedures have given rise to a multitude of treatment options in the restoration of a root-filled tooth. A paradigm shift is also noticeable in treating teeth with minimally invasive techniques which have propagated the idea of dentin preservation both during and after the endodontic treatment. Proper decision-making by the clinicians, based on the current evidence-based research on the

restoration of endodontically treated teeth will increase its survival rate, besides upholding the motto of "prevention of extension.