

THE MULTIFACETED USES OF MINERAL TRIOXIDE AGGREGATE

With key scientific advances increasing our understanding of human physiology and dental materials, the introduction of MTA (Mineral Trioxide Aggregate) as a reliable bioactive material in endodontic treatment has provided a quantum leap forward in healing rates for compromised teeth. No longer is the implant the only treatment option for patients who desire to retain their dentition when extensive endodontic pathosis is present. MTA will provide a biologically compatible seal that induces repair of the periodontium and stimulates bone regeneration. Applications for this tricalcium-silicate cement include endodontic surgery, retreatment and perforation repair, obturation, trauma and resorption, pulpotomy and direct pulp capping. The presentation will examine the literature supporting MTA usage, suggest methods for its delivery and placement, and present clinical cases that demonstrate its effectiveness in maintaining pulp vitality and resolving apical periodontitis under variety of challenging circumstances.

VITAL PULP THERAPY

Preservation of pulpal vitality is an overlooked objective in endodontics. This presentation will focus on new treatment modalities and materials necessary for predictable outcomes in direct pulp capping and pulpotomy procedures. Topics will include an overview of currently available materials, diagnosis and case selection, caries removal under magnification, the importance of hemorrhage control, techniques for the placement of mineral trioxide aggregate (MTA) and include long-term observation of selected cases.

MINERAL TRIOXIDE AGGREGATE OBTURATION

Mineral trioxide aggregate (MTA) has emerged as a reliable bioactive material with extended applications in endodontics which include the obturation of the root canal space. This article examines the literature supporting MTA as a canal filling material and suggests methods for its delivery and placement, and presents clinical cases which demonstrate its effectiveness in resolving apical periodontitis under a variety of circumstances. Case reports are presented documenting clinical outcomes after the application of MTA in cases that include retreatment, obturation combined with root-end resection, apexification, internal resorption, dens in dente and in conventional endodontic therapy. The review introduces clinicians to an alternative treatment strategy that may improve the healing outcomes for patients presenting with complex and challenging endodontic conditions.

CONSERVATIVE RESTORATION OF ENDODONTICALLY TREATED TEETH

Restoring endodontically treated teeth by preserving natural tooth structure and employing advanced adhesion technology has shown to significantly improve long-term retention rates. Our concepts of posting and coring the root canal treated tooth have dramatically changed in the last decade. This presentation will review a conservative approach to successful posting and coring and explore the elements of failure. In

understanding the increased predictability of properly placed adhesive cores, the restoring dentist can change the prognosis and outcome for teeth that were formerly destined to be replaced by the implant. The presentation will include case studies and review available materials and techniques.