

Multifaceted Applications of Calcium Silicate-based Cements (Mineral Trioxide Aggregate)

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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.