Premixed MTA in Adult Tooth Preservation Therapy

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Abstract

Mineral trioxide aggregate (MTA) is widely recognized as a bioactive material for vital pulp therapy and surgical endodontics. The introduction of premixed injectable formulations, such as OneFil Injectable, has improved the practicality and predictability of MTA application in clinical practice. This poster presents two adult cases that illustrate the effectiveness of premixed MTA in tooth-preserving treatment.

Case 1: A patient with deep caries and vital pulp underwent selective pulp removal and sodium hypochlorite disinfection. The pulp chamber was sealed with premixed MTA, which set within 10 minutes and allowed immediate composite resin restoration. This approach provided reliable pulp preservation and simplified restorative workflow.

Case 2: In a tooth with poor prognosis after nonsurgical root canal treatment, apical surgery was performed. The canal was obturated with premixed MTA prior to resection. Removal of only 2–3 mm of the apex achieved a predictable seal without the need for retrograde preparation or extensive surgical manipulation. This reduced operative complexity while maintaining long-term sealing ability.

These cases highlight the clinical advantages of premixed MTA, including simplified handling, faster setting, and effective sealing. Its use supports minimally invasive strategies that align with modern goals of preserving natural dentition.