



CLIFFORD J. RUDDLE, DDS
Founder & Director

MANAGING APICAL TRANSPORTATIONS W/MTA

An EndoActivator® System Application

ProRoot MTA (*Dentsply Tulsa Dental Specialties, or internationally, Dentsply Maillefer*) is easy to use and the powder is mixed with anesthetic solution, or sterile water, to a heavy viscous consistency. A fiberless 2x2 gauze may be used to wick-off surplus moisture and achieve the ideal viscosity. A small aliquot of this cement is picked-up and introduced into the prepared canal with any microtube carrying device (see Ruddle Supply Lists). Generally, these devices will allow MTA to be placed in the middle one-third of virtually any posterior root and well-shaped canal. MTA is then gently tamped and coaxed down the canal to approximate length using a customized nonstandard gutta percha cone as a flexible plugger. The gutta percha cone should be trimmed apically to have sufficient diameter to effectively condense MTA. This flexible gutta percha plugger may be utilized to move MTA around root canal curvatures and into root defects.

At times, when pressing MTA into narrowing cross-sectional canal diameters, the material will become dehydrated and not move. Pressing on MTA with an apically trimmed, flexible gutta percha plugger tends to compress the material and squeeze out water content from the MTA. In these instances, the MTA should be rehydrated in order to get it to slump, move, and adapt into any given root defect. Rehydration is accomplished by dispensing 1 or 2 drops of water into the canal. Gently insert a size 10 or 15 hand file into the MTA. Pump the file in short 1-2 mm strokes within the MTA to rehydrate the material so it can be readily moved and adapted. At this point, if there is excess water, simply wick-off using paper points. It is of critical importance to tamp a 3-5 mm aliquot of MTA to within 3-4 mm of any given defect or root apex.



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- When a sufficient volume of MTA is radiographically confirmed to be in position, it can be vibrated and moved into the defect and to length using the sonic EndoActivator system (*Dentsply Tulsa Dental Specialties or internationally, Dentsply Maillefer*).
- The EndoActivator handpiece drives highly flexible, noncutting, polymer tips. Three tip sizes are available in different D0 diameters and tapers. The tip selected is based on the length and diameter of the canal and position of the root defect.
- The tip is vibrated at the lowest power setting and is never placed closer than 2-3 mm from the root end. The sonic EndoActivator vibratory energy will generate a wave-like motion that will encourage MTA to slump, move and adapt to the configurations of the canal laterally, as well as control its movement to and gently against the periapical tissues.
- Prior to initiating subsequent procedures, a dense 4-5 mm zone of MTA in the apical one-third of the canal should be confirmed radiographically.

For additional information regarding Managing Transportations, see Dr. Ruddle's downloadable article reprints, related *Just-In-Time*® video segments and the "RUDDLE ON RETREATMENT" DVD series.

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