

# Delayed Versus Immediate Placement of Direct Resin Composite Restorations Following Vital Pulp Therapy with ProRoot<sup>®</sup> Mineral Trioxide Aggregate or Biodentine<sup>™</sup>: A Review of the Literature

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## Abstract

The quality of final restoration is one among other important factors that should be considered for a successful outcome of vital pulp therapy (VPT) because an inadequate coronal seal can allow bacterial penetration reaching to the pulp tissue, resulting in failure of VPT. Resin composite has been one of the most commonly used direct intra-coronal permanent restorations, whereas calcium silicate-based cements (CSCs), especially ProRoot<sup>®</sup> MTA and Biodentine<sup>™</sup>, are currently recommended as the pulp dressing materials of choice for VPT. However, resin composites cannot be immediately and directly placed as final restorations following VPT with ProRoot<sup>®</sup> MTA or Biodentine<sup>™</sup> because of their prolonged setting time. Moreover, the suitable time elapsed for the placement of resin composites over these two cements is still controversial. This review aimed to gather current information regarding the immediate or delayed placement of resin composite restoration following VPT with ProRoot<sup>®</sup> MTA or Biodentine<sup>™</sup>. In addition, a practical approach for resin composite placement has also been discussed.

**Keywords:** Biodentine<sup>™</sup>, delayed versus immediate placement, direct resin composite restorations, ProRoot<sup>®</sup> MTA, vital pulp therapy