



# Use of a Baseline to Avoid Post-Treatment Complications

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Treating deep decay that is approaching the pulp is an everyday occurrence for most practices. Often the key to salvaging the tooth without root canal therapy or extraction comes down to your technique and choice of materials. In particular, with indirect pulp capping procedures, it is essential to use a baseliner that resists micro-leakage and seals dentin tubules. One such baseliner is Ionosit from DMG.

## Clinical case

A patient presented with an old amalgam restoration that was placed approximately 20 years earlier. After removing the amalgam (**Fig. 1**), access to the decay was achieved using my high-speed handpiece (**Fig. 2**). Once good access was achieved, decay removal was initially accomplished with slow speed round bur. To get a “feel” for the extent of the bacterial ingress, I utilized a spoon excavator and slow speed rotary instrumentation (**Fig. 3**). In doing so, it is important to minimize high speed manipulation near the pulp chamber and nerve tissue that are already compromised.

I then utilized a caries detector (Expose, Centrix) to determine the extent of the caries invasion. Once I determined that the cavity was relatively caries-free and that some sound dentin remained, I cleansed and disinfected the cavity walls and remaining floor using a cavity prep (Tubulicid, Temrex). Its ingredients, including benzalkonium chloride and sodium fluoride (1%), remove debris, disinfect and bathe the tubules with beneficial molecules without opening the tubules.

As is the case with the majority of deep cavity excavations, there was no clinical indication of pulpal invasion. Thus, I used a bacteriostatic baseliner (Ionosit, DMG) that adheres to walls of deep cavity preps and does not allow for any micro-leakage once light cured. It seals the dentinal tubules, is anti-bacterial and reduces or eliminates post-operative sensitivity. This baseliner is applied effortlessly with syringe and tip, is light-cured, and forms a strong, impermeable base that can be quickly used beneath either composite resin



Fig. 1 - Removal of amalgam



Fig. 2 - Visualization of deep decay after access is achieved



Fig. 3 - Immediately after spoon and slow speed excavation



or milled restorations (**Fig. 4**). (This indirect pulp cap procedure is covered by CDT insurance code 3120.)

If bacterial incursion had invaded the pulp chamber, even when initial hemorrhaging had begun, I would have first used a bioactive calcium silicate-based liner as the baseliner, due to its regenerative properties and research documenting dentine genesis for pulp vitality preservation. There are three drawbacks to this material, however: It requires a triturator, the trituration process can be time-consuming, and the set time can take as long as 10-to-15 minutes. (This direct pulp cap procedure is covered by CDT insurance code 3110.)

Finally, I conditioned the enamel only (selective conditioning) and used my routine bonding technique to complete the restoration. The patient was very pleased with the aesthetics of the final restoration. More important, as with most patients, he experienced little to no post-treatment sensitivity and no discomfort long-term (**Fig.5**).



Fig. 4 - Placement of Ionosit baseliner

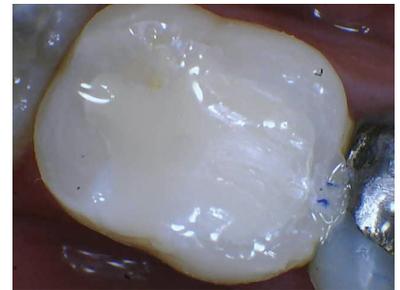


Fig. 5 - Final restoration