

Deep caries treatment

Using Hemaseal & Cide to treat extensive carious lesions

By Dr. Joseph J. Pelerin, Auburn Hills, Mich. Information provided by Advantage Dental Products Inc.

For new patients with numerous carious lesions, practitioners focus on treating the deepest lesions first. In doing so, post-operative sensitivity and dentin bond failure can create obstacles to both the doctor and the patient. Use of **Hemaseal & Cide** desensitizer can improve the success rate and minimize post-op sensitivity.

Following are step-by-step procedures for treating deep caries with consistent success.

Pre-op

Patient presented with extensive caries on teeth Nos. 20 and 30. Tooth No. 30 had such extensive caries that it was successfully treated first with a core and crown. A pre-op x-ray is taken of No. 20, the second tooth being treated.

The radiograph shows an extensive carious lesion on the distal (Fig. 1). If the tooth is totally asymptomatic with hot, cold, spontaneous ache, and percussion testing, offer the patient the option of treating the tooth with restorative dentistry, with the understanding that endo treatment may need to be done at some point.

Preparation

1. After mental infiltration with 4% Septocaine, access is gained into the lesion with a #35 inverted cone with a high-speed handpiece (Fig. 2).
2. After sufficient enamel is removed to gain access, a #6 round bur is used with a slowspeed handpiece. A gentle touch is needed to feel your way through the lesion (Fig. 3).
3. A caries detecting liquid along with a hand curette should be used to check for any remaining soft structure.
4. Once only crisp hard tooth structure exists, you can see a pink internal area. I call these "window exposures," where caries is so deep we see the blood vessels

through the extremely thin dentin wall (Fig. 4). While performing this clean-out,



Fig. 1 Pre-op x-ray.



Fig. 2 Use a #35 inverted cone to gain initial access.



Fig. 3 Prep after clean out with #6 round bur.



Fig. 4 Final clean-out.



Fig. 5 Isolated tooth with matrix system and ring in place.



Fig. 6 Hemaseal & Cide with 4% chlorhexidine.

I also note the patient's comfort. If the tooth is sensitive even with normal anesthesia, endo probably should be performed.

After thorough rinsing of the acid, excess water is suctioned and blown away, then apply Hemaseal & Cide with 4% chlorhexidine using a micro applicator brush (Figs. 6 and 7). The excess is wicked away with the brush blotting on a 2x2 gauze, leaving the prep moist but not puddling.

Next, place OptiBond Solo Plus (Kerr Corp., www.kerr-dental.com) and cure (Fig. 8).

Place two thin layers of Estelite Flow Quick flowable composite (Tokuyama America, www.tokuyama-us.com) (Fig. 9). *Note:* Stir composite with an explorer, making sure to eliminate bubbles. Then cure.

Final composite/ completed restoration

1. A final composite, Estelite A2 (Tokuyama America) is placed and packed, and a Contact Pro light-curing aid (Clinician's Choice Dental Products, www.clinicianschoice.com) is placed and pushed firmly to the distal and cured through (Figs. 10 and 11). (*Author's note:* Optimal handling, strength, chameleon-like shade matching, and polishability make this my favorite composite.)
2. After removing the Contact Pro, a void is present (Fig. 12). This void is then filled and cured.
3. The matrix, rings, and rubber dam are removed (Fig. 13). Occlusion should be checked repeatedly during the procedure. The anesthetized patient cannot be totally trusted to assess occlusion, so after I think it's perfect, I check three to four more times. Flashing could occur outside the restoration, which may trick clinicians and still ruin the case restoration.
4. Fig. 14 shows the completed restoration. Typically, this tooth will have no post-op sensitivity. The patient is instructed to call with any post-op problems. (*Author's note:* This is not always



Fig. 7 Apply desensitizer with a micro applicator brush.



Fig. 8 Apply dentin adhesive and cure.



Fig. 9 Place two thin layers of flowable composite.



Fig. 10 Place final composite, Estelite A2.



Fig. 11 Use Contact Pro curing aid to cure Estelite.



Fig. 12 Cured restoration displays a void.



Fig. 13 Final fill and cure just prior to adjusting.



Fig. 14 Completed restoration.

Technique

Hemaseal & Cide



Advantage Dental Products Inc.

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Desensitizer, wetting agent, and disinfectant with chlorhexidine

Features

- Easy to use. Simply apply, wick away the excess, then apply dentin adhesive or cement and complete procedure
- Available in 10-ml bottle or 50-bulb Uni-Dose packages
- Recent studies (references available on request) on bond strength suggest the addition of chlorhexidine prevents dentin bond failure
- 110% money-back guarantee
- Delivers proven integrity of total etch without post-op sensitivity

an ideal restoration. Once we are sure the tooth is comfortable, a partial crown will be done.)

Conclusion

Over the years, I have done this procedure many times, chiefly because the patient chose this option due to financial limitations. Previously, I experienced success rates in the 60% to 70% range. Since adding Hemaseal & Cide to the procedure, my success rate has improved to the high 90% range. Its ability to totally infuse and disinfect the bond zone without irritating soft tissue, I believe, is key in the improved success of the procedure.

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