CASE PRESENTATION

Treatment of Decayed Molar With a Silver Fluoride System

The patient presented with deep decay on the upper molar. This particular patient was limited financially and was adamant about avoiding root canal. So, we excavated the decay on the tooth and saw that we were in close proximity to the pulp. Before moving forward and bonding our restoration, we decided to treat the tooth with Riva Star, a silver fluoride and potassium iodide product from SDI.

Silver fluoride has been known for years to deactivate plaque, harden dentin that’s been affected by carious-causing bacteria, and reduce or eliminate sensitivity. Riva Star can do all those things. The negativity surrounding silver fluoride over the years has been that it would turn teeth black in the presence of caries. So, if you restored it with a composite, you would get darkening of the tooth under the composite. This would not be unhealthy, but it would be esthetically unpleasing.

However, Riva Star is different. After excavating all of the decay, in the absence of caries, it is a 2-step process: You treat it with your silver fluoride, followed by an application of potassium iodide. As the second component in the Riva Star kit, the potassium iodide neutralizes the color-changing ability of the silver fluoride and has no deleterious effect on the final result. Silver fluoride, in general, has no detrimental effect on the bond strength of composite or of resin to dentin, and that has been shown in clinical studies.

Having excavated the decay, the dentin was etched for 5 seconds. We then rinsed it off and placed Riva Star according to the manufacturer’s instructions, with the silver fluoride followed by the potassium iodide. After rinsing, we placed SDI’s Riva glass ionomer, which served as a base that sits on the dentin.

Once that set, we did another selective etch of the enamel using 37% phosphoric acid for 5 seconds. We rinsed that off and then applied the adhesive over the glass ionomer and enamel. After agitating for 20 seconds, we air dried and then light cured for 20 seconds. Finally, we restored with our composite over the entire prep. The patient was comfortable throughout the procedure and experienced no sensitivity. The final result is a beautiful restoration with no discoloration. That’s the beauty of Riva Star.