



**TIMOTHY M. BIZGA, DDS, FAGD**

Dr. Bizga is a general dentist based in Cleveland, OH, with a diverse and extensive background in dentistry. Before earning his DDS from the University of Michigan School of Dentistry, he gained firsthand experience as both a chairside assistant and a dental lab technician, giving him a unique perspective in the field. He currently serves as an adjunct clinical assistant professor at his alma mater and is an active member of the American Dental Association and a Fellow in the Academy of General Dentistry. Beyond clinical practice, Dr. Bizga is a Certified John Maxwell speaker, trainer, and coach, as well as a certified DISC profile trainer. He also contributes to the profession as a clinical consultant for The Dental Advisor and Director of Education at Smile Source. Committed to service, he frequently participates in dental missions worldwide, giving back to communities in need.

## CENTRIX

# Silver Diamine Fluoride: It's Not Just for Kids

**T**here. I said it out loud. And I hope I have your attention.

After 19 years in private practice, I believe it's time that we as oral healthcare providers rethink the way we view fluoride treatment—it's not just for kids. In particular, silver diamine fluoride (SDF) has emerged as a powerful tool that can help us support our patients' teeth from cradle to grave.

Since its introduction to the North American market in 2015, SDF has proven its efficacy in caries arrest, indirect pulp capping, and managing dentin hypersensitivity. Beyond its effectiveness, SDF generally presents patients with a cost-efficient solution to address the above clinical challenges.

For example, solutions like Centrix's SilverSense SDF help patients avoid preventable pain and discomfort, and because it will not stain healthy enamel or dentin, it eliminates concerns over "black teeth."

### Case in Point

A 30-year-old woman came to my office after a long hiatus from regular dental care. Her reasons for the lapse in treatment? The usual suspects—time and money.



**Figure 1**—Preoperative x-ray showing deep distal decay on the lower right first molar

At this visit, she returned seeking care for her lower right first molar, which had recently fractured while eating (Figures 1 and 2). A problem-focused clinical exam was performed, and an x-ray was taken.

After reviewing the treatment options, the best immediate approach was to arrest the decay and place a glass ionomer restorative as a temporary step toward a final solution.

We decided to apply SilverSense SDF, which comes in a 5-mL bottle with precise 30-μL drop dispensing for fast and easy application. To achieve the desired result, best-practice principles for use are as follows (Figures 3–5):

- 1** Clean and dry the tooth area where SDF is to be applied.
  - Isolate the tooth
  - Remove excess plaque
  - Dry area with a cotton pellet
- 2** Place 1 to 2 drops of SilverSense SDF, which is tinted blue for improved visibility, into a disposable dappen dish.
- 3** Apply SilverSense SDF directly to the affected area with a Benda Micro applicator or cotton pellet. Repeat until the area remains wet.
- 4** Allow to air dry for 60 seconds; do not rinse. Remove excess with a cotton pellet.
  - Optionally, teeth treated with SDF may be filled with an interim type of restorative material such as Centrix's Tempit or a glass ionomer restorative. The decision to do this is case by case.
  - If the decision is made to place a same-day restoration, a self-curing material should be used, as light curing (and the heat it generates) prematurely precipitates the silver in the SDF, preventing ideal saturation and penetration depths.

## Final Thoughts

The final step in this case was placing a temporary glass ionomer restorative until the tooth can be fully restored (Figures 6 and 7). While numerous treatment options exist for cases like this one, taking the time to evaluate personalized solutions reflects

our practice's commitment to both dental health and overall patient well-being.

Having a minimally invasive and effective option like SilverSense SDF has proven to be an invaluable tool in my noble quest to help teeth reach their 85th birthday—after that, all bets are off!

## References

1. Bhat Y, et al. Silver diamine fluoride: A literature review. *Essent Dent*. 2023;2(1):20–24.
2. Shah S, et al. Silver diamine fluoride: A review and current applications. *J Oral Appl Oral Res*. 2014;5(1):1–21.
3. Zhang W, et al. Silver diamine fluoride and education to prevent and arrest root caries among community-dwelling elders. *Caries Res*. 2013;47(4):284–290.
4. Tan HP, et al. A randomized trial on root caries prevention in elders. *J Dent Res*. 2010;89(10):1086–1090.



Figure 2—Clinical presentation of decay



Figure 3—Cotton roll isolation



Figure 4—Application of SilverSense SDF directly onto the lesion using microbrush applicator



Figure 5—Lesion after 60-second application of SilverSense SDF; note the silver beginning to precipitate causing a dark color on dentin



Figure 6—Interim glass ionomer restorative placed



Figure 7—Postoperative x-ray

## GO-TO PRODUCT USED IN THIS CASE

### SILVERSENSE SDF

SilverSense SDF is an evidence-based solution that helps deliver better patient care by alleviating hypersensitivity and providing benefits that allow patients to comfortably wait for restorative treatment. Ideal for use with both primary and permanent teeth, SilverSense will not stain healthy enamel or dentin, although infected lesions may turn darker. A cost-effective treatment option for patients with hypersensitivity, SilverSense hardens infected dentin and a restoration may then be placed on top.\* Tinted blue for improved visualization, it is delivered via a 5-mL dropper bottle that delivers one 30-μL drop at a time.

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\*Horst J, Seto J. Silver fluoride as a treatment for the disease dental caries. *bioRxiv*. 2017 Jun; 152207.

