Lingual Veneers and Aesthetic Bonding

Augmentation, Not Amputation

Quite often, dentists are the first health professionals to recognize the effects of bulimia nervosa. As dentists, we all know how much havoc bulimia can wreak on the health of a person’s teeth. Worn, ragged, chipped, thin, weak, and fragile are just a few of the words that are used to describe the irreversible damage that bulimia can cause to teeth (Figure 1). As a result, a person can have pain, increased tooth decay, gingival recession, xerostomia, an unattractive smile, decreased self-esteem, as well as oral pain that can significantly affect the patient’s quality of life. In severe cases, full-coverage crowns may be the only option. In an effort to help these patients, full-coverage restorations require even more tooth removal (especially on the facial and interproximal surfaces), further reducing any remaining sound tooth structure, making the teeth more fragile. This can make the patient even more self-conscious. If treated and restored early, before the damage is too severe, crowns, and all that they entail, can be avoided in these patients.

AN ALTERNATIVE APPROACH

So, if full-coverage crowns are not always the optimal treatment for lingual incisal acid-eroded teeth, what is? Rather than removing any healthy enamel from the facial and interproximal surfaces, lingual veneers coupled with cosmetic facial bonding, offer a conservative alternative. The goals are to build up and restore worn-away teeth, while preserving as much of the natural tooth structure as possible. Lingual veneers should be considered whenever possible. The more tooth structure that we can save and “bank” for later, the better.

CASE REPORT

Diagnosis and Treatment Planning

A 25-year-old female patient presented with severe sensitivity due to the extensive loss of enamel on the inside of her front teeth as a result of an eating disorder. She was also very self-conscious about her looks (Figure 2). The fragile edges of the upper front teeth gave the patient an inverted, negative smile, and a worn-out appearance with noticeable, see-through edges. Due to severe sensitivity (even to air), Septocaine (Septodont) was buffered by OnSet (Opharma) at the chair, and administered with The Wand (Aseptico) for a painless injection that would also provide rapid onset. As a more conservative treatment, lingual veneers demand careful planning and contouring of the teeth to ensure preservation of as much healthy natural tooth structure as possible. A smooth, football-shaped diamond (NTI 80456 [Axis Dental]) and small round burs were used to smooth the sharp corners of enamel and create a definitive finish line. The final preps should be very minimal, yet allow (0.5 mm) for sufficient thickness and a positive seat of the lingual veneers (Figure 8). Preservation of healthy tooth structure provides strength and reinforcement while drastically reduc-

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Temporalization was done using simply 2 applications of Tokuyama Varnish over the prepared surfaces and, as a result, she reported less interim sensitivity than before the preparations.

The indirect composite lingual veneers were fabricated (Pearlfect Smile Veneer [Mizrachi Dental Lab]) using an indirect composite (Premise Indirect [Kerr]) that is processed in a nitrogen environment under pressure, providing 100% conversion of the monomer as compared to 70% with just light-curing alone. Figure 9 shows the final restorations from the lingual perspective on the lab casts. From the front view, the upper front teeth have been restored to their original length with the lingual veneers extending to the incisal edges and onto the facial surface (Figure 10). This is an additive process—toothing augmen-
tation, rather than amputation.

The bonding protocol was the same as if placing facial veneers. Prevue (Cosmedent) try-in pastes were used to accurately select the correct cement shade. Anesthesia was administered (as described above), and the teeth were isolated using metal strips. The teeth structure to be bonded to was sandblasted (Etch-Master [Groman]) to increase the surface area for greater retention and bond strength. We then used a total-etch bonding technique to seat the lingual veneers with a resin cement system (Complete adhesive and Insure cement [Cosmedent]).

Once bonded, a “sandwich” bonding technique was utilized. With the lingual veneers as a matrix adding length and strength from the back side, a microfill composite resin (SB3 Renamel [Cosmedent]) was placed and sculpted on the facial surfaces to build up and improve the aesthetics (Figure 11). Nano/microhybrid diamond polishes, discs (FlexiDiscs [Cosmedent]), and Enamelize (Cosmedent) polishing paste finished the restorations. The patient’s full smile shows how the worn edges were elongated and evened out to create a beautiful and propor-
tional smile (Figure 12). The lingual sandwich veneers strengthened and reinforced the teeth from further damage and drastically reduced sensitivity so a healthy diet and lifestyle could be resumed (Figure 13). These conserva-
tive restorations not only restored the patient’s dental health and her beauti-
ful smile, but they also succeeded in revitalizing her appearance and self-confidence (Figure 14).

**CLOSING COMMENTS**

Though dental practitioners are often the first healthcare providers to identify the erosive effects of bulimia nervosa, we may often be the last ones to address this condition with our patients. According to a recent article published in the April 2014 issue of the *Journal of the American Dental Association*, less than half of oral health professionals routinely evaluate pa-

**Suggested Readings**


Dr. Berland is a Fellow of the American Academy of Cosmetic Dentistry, the co-creator of the Lorin Library Smile Style Guide, and the developer of denturewearers.com. He also is the founder of Berland Dental Arts, a multidisciplinary specialty practice celebrating 25 years in the Dallas Arts District that pioneered the concept of spa dentistry. He currently serves as the editor of the *Cosmetic Dental Tribune*. He is also the creator of “Biomimetic Same Day Inlay/Onlay,” and “The Latest and Greatest in Cosmetic Dentistry—A Full Mouth Rehab in 2 Visits,” both awarded CDE credits. His unique approach to dentistry has been featured on television and publications such as 20/20, *Time, Town & Country, Reader’s Digest, GQ, US News & World Report, Woman’s World, Details, Dallas Morning News, Good Morning Texas,* and *D* magazine. In 2008, The American Academy of Cosmetic Dentistry honored him with the 2008 Outstanding Contributions to the Art and Science of Cosmetic Dentistry Award. He can be reached via e-mail at drberland@dallasdentalspa.com.

Disclosure: Dr. Berland reports no disclosures.

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Disclosure: Dr. Kong reports no disclosures.