**TECHNIQUE**

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**CLINICAL INSIGHTS**

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**TECH BRIEF**

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**ENHANCE A SMILE WITH CROWNS, VENEERS AND AN IMPLANT**

The author illustrates using a combination of treatments including an implant-supported crown to improve this patient’s smile and dental health.

**IN THIS MONTH’S CLINICAL INSIGHTS**

column, Dr. Ross Nash shows how he uses IPS e.max crowns and veneers in combination with an esthetic implant to improve the smile of a patient. He utilizes a self-adhesive cement for the natural teeth, a light-cured resin barrier material to protect the implant screw and a retrievable implant cement for placement of the implant-supported crown.

**Introduction**

Veronica presented with a desire to improve the appearance of her smile. When she was younger, she had been through maxillofacial surgery in both arches and orthodontic treatment for an extreme malocclusion. Her smile before treatment is shown in Figure 1. The retracted facial view in Figure 2 shows that the maxillary right canine had a worn incisal edge and both central incisors, while vital, appeared dark.

Endodontic treatment had been performed on her left lateral incisor which had experienced resorption at the root tip (Fig. 3). It seemed to be stable in the bone, but it was agreed that an implant would be likely in the future.

All-ceramic crowns for her maxillary central incisors, lateral incisors and canines along with porcelain veneers for her first and second maxillary premolars were the treatment plan she wanted.

**The process**

**STEP 01** The 10 maxillary teeth were prepared (Fig. 4), and impressions and an occlusal registration were taken. Provisional restorations were fabricated and the patient was released.

**STEP 02** At the dental laboratory (daVinci Dental Studios, West Hills, California) six IPS e.max crowns and four IPS e.max veneers were fabricated (Fig. 5). They were bonded to place using Fusion ZR Dual Cure Resin Cement (TAUB Products) after etching the teeth for 10 seconds with enamel etching gel. The final restorations can be seen in place in Figure 6. The post-operative radiograph of the left lateral incisor can be seen in Figure 7.

**The implant**

A few months after the above restorations were placed, I referred Veronica to a periodontist in Charlotte, North Carolina, (Kenneth Corsig, DMD, MHS, Charlotte Perio) to evaluate for replacement of the left lateral incisor with an implant supported crown. He agreed with the need and placed a Straumann implant which was allowed to integrate for three months. The impression abutment at the impression appointment is shown in place in Figure 8.

**Cementation of the implant crown**

**STEP 04** The screw head was covered with Liquid Magic Resin Barrier by TAUB Products (Fig. 12) and light cured with an LED curing light (Fig. 13). This material cures to a rubbery state and does not require a cotton pellet. The cured Liquid Magic in place is shown in Figure 14.

**STEP 05** The IPS e.max crown was cemented to place with Zero G Biocompatible Cement (TAUB Products). Figure 15 shows the Zero G being injected into the crown. It was placed with finger pressure and held to place with an instrument (Fig. 16) until the gel state (about 30 seconds) when the excess was peeled away using a scaler (Fig. 17).

**STEP 06** Dental floss was worked in between the proximal areas removing excess cement there (Fig. 18). An LED curing light was used to “finish” the cure of the dual curing material.

**The final result**

Figure 20 shows the final result with the implant crown in place. The radiograph of the final implant and crown in place can be seen in Figure 21.

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1. The patient’s smile before treatment
2. Maxillary retracted view before treatment
3. Pre-operative radiograph of left lateral incisor
4. Retracted view of prepared teeth
5. Eight IPS e.max restorations on mirrored surface
6. Ten IPS e.max restorations in place
7. Radiograph of lateral incisor after IPS e.max crown placement
8. Implant impression abutment in place
9. Zirconia Oxide implant abutment on working model
10. IPS e.max crown on implant abutment
11. Implant abutment in place
12. Resin Barrier placed over implant screw
13. Liquid Magic Resin Barrier light cured
14. Cured Resin Barrier
15. Zero G Bio Implant Cement placed into internal surface of crown
16. IPS e.max crown placed on implant abutment
17. Implant cement removed with a scaler at gel state
18. Floss worked into interproximal area
19. Light cure implant cement
20. Retracted view of final result
21. Radiograph of implant supported crown in place
22. The patient’s new smile

21. The patient’s new smile is shown in Figure 22.

Conclusion
In this article, I illustrated the use of IPS e.max crowns and veneers in combination with an esthetic implant to improve the smile of a patient. I utilized a self-adhesive cement for the natural teeth, a light-cured resin barrier material to protect the implant screw and a retrievable implant cement for placement of the implant supported crown.

ABOUT THIS COLUMN
Every month in DPR Dr. Ross Nash’s how-to column will showcase a variety of products he uses to provide great care to his patients. Each month will focus on a particular procedure or material that Dr. Nash has used in his practice, with the goal to provide practical information for every dentist.