

Solving a Large Space in the Anterior

In this unusual case, a small no-prep veneer offered the patient a more esthetic smile.

By Luke Kahng, CDT

This particular case deals with an unusual situation. The patient was missing tooth No. 8 and had an implant placed with a zirconia abutment. The laboratory produced a crown for her that, when placed, was not esthetically appealing because the width of the crown was much larger than that of her natural teeth. Any restoration that was placed there would reflect that abnormal-looking gap. When she came into the laboratory to discuss color, it was apparent to the technician that her final results would still reflect that oversized space unless the dilemma was addressed. Prior to this, she had not comprehended fully what the problem was; she just knew she did not like her smile. When it was explained to her, she was in complete agreement with trying to fix this issue and, at the same time, match the color of her natural dentition.

The author's suggestion was that they create a very small no-prep veneer—at about 20% of the size of a normal veneer—to place over the mesial area of tooth No. 7. When it was bonded into place, it would give the illusion that the teeth were all the correct size. The patient was in agreement, as was the clinician. The author then set about his work.

Treatment

The clinician prescribed a zirconia crown and abutment for the patient's tooth No. 8 (Figure 1). The gap between tooth No. 7 and tooth No. 8 was larger than normal, creating an unesthetic appearance. With that large a space to fill, the two centrals could not match in size. The technician mentioned his concerns to the patient, who was in agreement. He then recorded her color, using GC shade tabs (GC America, www.gcamerica.com), noting especially the incisal one third (Figure 2).

On the cast model, he used 0.001 thickness of platinum foil. He then burnished the foil onto the veneer on the model (Figure 3). With the foil still in place, he applied porcelain to the veneer. For excellent color with the zirconia restorations, the author uses GC Initial ZR Porcelain. The porcelain was applied to the very small veneer with enamel and translucency twice, after the first and second bakings (Figure 4). The author first layered enamel on top of the foil on the cast model (Figure 5), then placed it into the patient's mouth with the foil still in place. The concept was to make it thicker and decrease the width of tooth No. 8 in doing so. This effort would thereby save the patient's natural

dentition. After glazing, the foil was peeled off with a pair of tweezers..

A mirrored image of the finished crown and no-prep veneer was viewed (Figure 6). Maximum translucency was created with GC IQ Lustre Paste L3. In the initial try-in stage, it was apparent exactly how small and thin the veneer was (Figure 7) and how it eventually fit over the patient's natural tooth. An immediate shot (Figure 8) showed side-by-side how well the veneer and crown fit together in the mouth. The veneer seen alone makes clear exactly how small an area it covered (Figure 9). For harmony and blended colorization check, the author photographed a side view of the patient's dentition. In the final view, after light-curing and bonding, the patient was again photographed (Figure 10).

Discussion

Although unusual, this resolution could be employed by other dental professionals if the situation called for it. Good communication between the technician and the clinician is necessary in order to correctly analyze the patient's dentition and decide whether or not such a solution would work. The technician should also evaluate the patient's model and



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FIG. 1



FIG. 2

TREATMENT STEPS (1.) The zirconia abutment for tooth No. 8. **(2.)** A GC shade tab was used to match the incisal one third.

color. Sometimes, tooth reduction is necessary, which can defeat the purpose. Examples of this are when there is too much undercut or the contact between the teeth is too close; it is then necessary to open the embrasure because the teeth might crack if bonded in the way the case described demonstrated. Several considerations are worth analyzing in a situation like this one.

As a rule, preparation is necessary when:

- there is tetracycline staining.
- there is dark color underneath.
- facial contouring will create bulkiness.
- interproximal contact is too close.

No-prep veneers will work if:

- interproximal contact allows it to work.
- increasing incisal length is the goal.
- color change is sought.
- slight bulkiness is acceptable.
- restorations can be burnished and polished without grinding.
- only a certain area of the tooth will be covered.
- color is to be increased.

Conclusion

In this case, the patient was extremely happy with her new smile. She came into the laboratory expecting to get a color match but was elated to go away sporting a natural-looking dentition with shape and size concerns completely put to rest. She had no more worries

about smiling in public.

Acknowledgement

This case is courtesy of Susan M. Mazzei, DDS, of Warrenville, Illinois.



LAB AND CLINICAL STEPS (3.) Platinum foil on the cast. **(4.)** Porcelain application on tooth No. 7. **(5.)** Layered enamel on top of the foil in the patient's mouth. **(6.)** The finished restoration as shown on the mirror. **(7.)** The initial try-in stage. **(8.)** Immediate shot showing the veneer and crown side by side. **(9.)** The try-in veneer alone. **(10.)** The final restoration after light-curing and bonding.