

Maryland Bridge provides predictable and satisfying treatment option

Michael Pilon, DDS

This case study describes a treatment option using a Maryland Bridge with adhesive cement. The patient was a 67-year-old male who lost a maxillary right central incisor due to the root fracture of a 30-year-old crown (Fig. 1).

Overview:

Today techniques and materials are available that provide the typical clinician a number of options which are both professionally satisfying to the dentist and aesthetically and functionally appropriate to the patient. For this patient, there were four treatment options available: an implant, a flipper, a three-unit bridge, and a Maryland Bridge.

- **Implant**—The implant option had the advantage of long-term stability. The disadvantages were the cost and the time factor before a final restoration could be completed.
- **Flipper**—The only advantage for the flipper was the cost factor. A few of the disadvantages were the lack of mastication ability, and the possibility of problems during speaking.
- **Three-unit bridge**—The advantages for this option included excellent stability and function. The major disadvantage was the necessity of reducing viable tooth structure.
- **Maryland Bridge**—The advantage for this type of bridge was in the minimal reduction on the lingual of the abutment teeth. The given disadvantage for this option was the possible debonding of the bridge.

The patient was presented with all of the options and selected the Maryland Bridge option. I agreed this was the best option, given all that were available, and the patient's personal needs. And, most important, I was confident the debonding disadvantage would not occur because of my choice in bonding materials, Tenure® A and B and Infinity®. I have used this combination with previous Maryland Bridge procedures and have had total bonding success with total assurance.

Procedure:

The preparation was minimal. I lightly roughened the lingual surface of the abutment teeth in order to provide an outline for the laboratory. The patient then went to a laboratory for a shade assessment.* Having a dedicated and skilled laboratory technician is critical for these types of restorations.

This case also had an interesting challenge because the patient had a diastema he wanted to maintain. The laboratory created an imaginative Maryland Bridge with a standard lingual attachment on the right lateral incisor. The lingual attachment on the left central incisor was connected to the bridge using a "ring." The ring is unnoticed by the patient, thanks to the creative design used by the laboratory (Fig. 2).



Fig. 1

The cementation and placement procedures are as follows:

1. Etch the tooth-side surfaces of the lingual wings to roughen the metal surface (Microetcher™, Danville Engineering).
2. Clean the lingual surfaces of the lateral and central incisors using a prophy powder.
3. Etch the lingual surfaces of the prepared teeth with a 35% orthophosphoric acid (Etch 'N' Seal®). Rinse the etchant for 20 seconds, and then dry the area.
4. Apply Tenure® A & B for a total of 4 to 5 layers to the etched surfaces. Lightly dry the Tenure mixture.
5. Apply Infinity® Syringeable to the etched tooth-side surfaces of the lingual wings of the bridge.
6. Seat the Maryland Bridge and hold it in place for about five minutes.
7. Shine a curing light through the tooth from the labial surface. I successfully used the Rembrandt® Allegro™ LED light.
8. Trim and remove any excess Infinity from the wing margins of the bridge. If you want to remove excess Infinity before it sets, manually hold the bridge in place and using a brush dampened with Tenure® S gently remove excess Infinity from the margins.
9. Remove any set Infinity with a scaler.

Conclusion:

Maryland Bridges are viable options for many restorative cases when there is the assurance of complete, long-term bonding. Previously, the possibility of debonding has been one of the disadvantages for completing Maryland Bridge procedures. Using Tenure A &



Fig. 2

Continued on page 46

Maryland Bridge provides predictable and satisfying treatment option

Continued from page 44



Before

B and Infinity eliminates this disadvantage and using this type of restorative procedure is a predictable and satisfying treatment option for both dentist and patient.

During a routine 6-month recall, the appliance bonding was still effective. Both the physical and aesthetic characteristics were excellent (Fig. 3).

*The author would like to thank K & R Laboratory in Ottawa, Ontario for providing excellent aesthetic and functional results for this case.

For more information on the Den-Mat products used by Dr. Pilon please call Den-Mat at (800) 445-0345.



Fig. 3 After



Michael Pilon, CD, BSC, DDS, DDPH, is a graduate of McGill University. In 1980, Dr. Pilon attended a postgraduate program in Dental Public Health at the University of Toronto. After a 22-year career in the Royal Canadian Dental Corps, he entered private practice in Ottawa, Ontario in 1989. Dr. Pilon has lectured in both Canada and the United States. He describes himself as a "typical" dentist who enjoys coming to work—every day. You can reach Dr. Pilon at (613) 722-2223 as well as on the message boards at DentalTown.com.