

Chairside Fabricated Fiber-reinforced Fixed Partial Denture

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In this issue of the *Journal*, the case report by Garoushi et al illustrates an exciting technique for fixed tooth replacement that can be done chairside using a new class of dental material, fiber-reinforced composite. This approach provides the patient with a cost effective treatment alternative that a clinician can choose to augment the traditional fixed prosthodontic approaches of porcelain fused to metal or all ceramic fixed partial dentures. The technique utilizes skills and materials most clinicians are familiar with – resin composite restorative materials and acid etch techniques. The beauty of this approach is the minimal to no abutment tooth loss in the placement of the bridge. This also allows the patient to consider other treatment options in the future – such as an implant. The success of this approach relies on the ability of the clinician to properly construct the framework for the bridge using strips of fiber-reinforced composite. The manipulation of the FRC material and the framework design are variables that must be correctly done to provide the basis for a successful chairside bridge. These skills need to be mastered by the clinician and once these skills are mastered, this approach has the potential to provide the patient with long term results. Our FRC research group at the University of Connecticut School of Dental Medicine has been placing chairside FRC bridges for about nine years with great success.

We have developed a technique that uses a pre-fabricated FRC framework that eliminates the need for the clinician to piece together a framework before developing the pontic tooth [1-8]. We have applied this approach for all areas of the mouth, incisor, canine, premolar and molar. The problems we have seen with this technique usually revolve around the particulate resin composite used for fabricating the pontic shape. These are primarily in the area of cohesive bulk fracture of part of the pontic or lust of luster and high gloss of the surface. The strength of the FRC attachment to the abutment teeth and the framework itself is rarely where these bridges develop problems. As improvements in particulate resin composite technology develop, this technique has the potential for even more impressive results.

Clinicians should consider this as one of their treatment alternatives when considering fixed tooth replacement.

References

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