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Reprint requests: Harald O. Heymann, DDS, Med, Department of Operative Dentistry, UNC School of Dentistry, 302 Brauer Hall, Chapel Hill, NC, USA 27599-7450; e-mail: Harald_Heymann@dentistry.unc.edu

COMMENTARY

THE CAROLINA BRIDGE: A NOVEL INTERIM ALL-PORCELAIN BONDED PROSTHESIS

W. Dan Sneed, DMD, MAT, MHS*

Adhesives have certainly changed the way we practice dentistry. Macromechanical resistance and retentive features have historically been a hallmark of quality restorative dentistry. Even today, it is certainly wise to incorporate mechanical design along with adhesives. This article, however, presents a very viable alternative to the traditional grooves, pins, and slots to retain a single-tooth pontic.

The author begins with a thorough review of the pertinent literature. He describes the various methods of fabricating conservative, single-tooth, fixed partial dentures, and most of these require some significant preparation of the abutment teeth. The author is intimately aware of his options, as well as the advantages and disadvantages of each. With that understanding, he then proposes a truly adhesive bridge that is totally reversible. At first read, this approach may seem futile. Many dentists have tried "gluing" pontics between two abutment teeth only to see them quickly fail. The difference here is the dentist's clear understanding of the indications for and the limitations of this technique. There is also an understanding of occlusion and material and adhesive dynamics.

For this procedure, the author selects only patients who meet a defined set of criteria, and those patients understand what to expect. Then feldspathic porcelain is used because it, unlike some other ceramics, can be etched with hydrofluoric acid. The application of a silane then ensures that the adhesive interface is stronger than the cohesive strength of either the porcelain or the composite.[1–3] The enamel is lightly abraded with a diamond to enhance an already tenacious enamel bond.[4] A hybrid composite is selected because of its strength. The connector areas must be of a certain width and length, and again and again, the author makes informed judgments.

The true message of this article is not just another technique but a process of problem solving based on knowledge and judgment. If we all approached restorative dentistry this way, with an informed patient and a knowledgeable dentist, surprises would be few and far between and success would be routine.

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**Professor and chair, Department of General Dentistry, MUSC College of Dental Medicine, Charleston, SC, USA*