

Routine Restorative Procedures That Yield Predictable Results

by Irwin M. Becker, DDS

Reprinted from the November 1992 edition of Dental Economics

The use of blueprints and detailed model production are very common in engineering. Furthermore, exact drawings are essential to any construction project. Why, then, are these elements often missing in the practitioner's routine approach to restorative dentistry?

The following case report illustrates the use and benefits of mounted study casts, a trial equilibration and a diagnostic work-up prior to any actual tooth preparation. The case also clearly demonstrates the predictable tissue response achievable with tooth preparations that relate properly to healthy gingival architecture and its biologic dimensions. Functionally and esthetically, the case evolves from the provisional acrylic restoration to the finished porcelain-fused-to-metal work in a routine, but extremely predictable, manner.

A 30-year-old male presented with an inadequate flipper partial replacing both maxillary central incisors. There was the need to complete some routine operative dentistry. Even though the patient had very little evidence of temporomandibular dysfunction, it was deemed appropriate to perform occlusal equilibration to eliminate centric-relation prematurities as well as to establish a more effective anterior guidance.

These procedures were first accomplished on study casts that are mounted on a Denar Anamark articulator utilizing a centric record made with Mizzy Articulating Wax, originally formulated for Dr. Clyde Schuyler.

After confirming that occlusal equilibration could be accomplished, the missing teeth were replaced on the study casts utilizing a light-cured composite material (Triad). Incisal edges were corrected and guidance improved also using the Triad material. A provisional shim was then fabricated on the Biostar unit from Great Lakes. This provides an excellent form from which the acrylic provisional can be made in an indirect manner.

The provisional restorations are made from models poured in Whip Mix Snap Stone immediately after the maxillary lateral incisors have been prepared. In this case, the occlusal equilibration was accomplished on the same appointment. Rubber Sep (George Taub) is applied to the indirect casts and then coated with a lubricant such as Foil Cote (Modern Dental Materials). The provisionals then are fabricated on these casts utilizing the previously-made from reversible hydrocolloid impressions (Acculoid), the marginal integrity is excellent.

Please note the excellent tissue response demonstrated at the final try-in appointment.

A detailed laboratory prescription is enhanced by the incisal-edge matrix that delineates the exact incisal-edge position of the provisional restoration. This is essential to provide the same esthetics and phonetic crispness that were worked out in the provisional restoration. The final insertion appointment is literally a celebration of all the effort put in to preplan the case. The subtle, mid-course corrections are already worked out in the provisional restoration (Cold Pak by Motloid Corp).

This case report illustrates the use and benefits of mounted study casts, a trial equilibration and a diagnostic work-up prior to any actual tooth preparation.