Special technique for attachment incorporation with an implant overdenture

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The Hader bar system is a popular bar and clip concept because of its 20-degree clip rotation, simplicity, and versatility. Two procedures may be used to incorporate the Hader nylon clip into a denture base. The direct technique consists of attaching the clip to the denture base as a clinical procedure. With the indirect technique, the clip is attached during laboratory processing. An alternative method of attaching the clip with a metal superstructure is presented. This procedure combines the advantages of the direct and indirect techniques for incorporation of the nylon clip of the Hader bar into the denture base. (J Prosthet Dent 2003;89:93-6.)

Implant-supported overdentures offer improved retention stability, function, proprioception and an acceptable level of comfort." Approximately 60% of implant restorations in completely edentulous patients are restored with the overdenture concept because of functional, anatomic, economical, or esthetic considerations.

A large number of retentive devices are currently available presenting a wide range of function and fabrication complexity. In general, implant-supported overdenture attachments can be classified as studs, magnets, and bars. Determinants for attachment selection include type of prosthesis, the length of the bar, the number and inclination of implants, dexterity, expectation, and financial capabilities of the patients. Although magnets and studs provide more favorable load transfer to bone and are less expensive and easier to use, bar and clip attachments provide greater retention and stability, permit splinting of implants, and can mask excessive residual ridge atrophy. A variety of bar designs has been advocated. The Hader bar developed by Helmut Hader in the 1960s has become one of the most popular bar-and-clip concepts because of its simplicity, versatility, low profile, and 20-degree clip rotation. Plastic clips are advantageous over metal clips because they are easier to replace and are usually less expensive.

Two techniques are used to incorporate the clip into the denture base. The direct technique allows the clip to be inserted intraorally. The indirect technique accomplishes the clip insertion during laboratory processing. Common problems with the indirect technique include clip contact with the bar without tissue contact under a functional load with the denture base, and possible movement and damage to the attachment during packing procedures. The disadvantages of the direct technique include necessity for blocking out all undercuts during the clinical procedure, the retention clips that will not hold if free monomer is present, and shrinkage, water sorption, and voids within the autopolymerizing resin.

**TECHNIQUE**

**Bar assembly fabrication**

1. Record the final impression in the customary manner with the impression pins or screw-retained impression copings.
2. Attach the appropriate analog and pour the impression by use of a die stone (Silkey Rock; Garreco, Heber Springs, Ark.).
3. Fabricate the Hader bar (Hader bar; Sterngold, Attleboro, Mass.).
4. Verify the framework fit intraorally (Fig. 1).
5. Pick up the bar in a new complete arch final impression with screw-retained impression copings and pour die stone for superstructure fabrication.

**Metal superstructure fabrication**

1. Place the appropriate number of nylon clips on the bar. Block out all undercuts gingival to the clips and to the greatest contour of the bar using utility wax (Wax plastic; Peristicks, Buffalo, N.Y.) (Fig. 2). Keep approximately 1 mm of the lower part of the

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