CBS, CM-Rider, Dolder Bar & Sleeve and Ackermann Clips

Preliminary and Initial Attachment Procedures

Phase 1: Always refer to the Preliminary and Initial Attachments Procedures, page 8. Only this will guarantee a successful restoration.

The following procedures are for endodontically treated teeth with root copings connected by a Hader-EDS bar (plastic, gold, ti) or a Dolder Bar (gold, plastic). The overdenture utilizes adjustable metal riders/clips instead of plastic clips. Unlike plastic clips, metal riders/clips have vertical resiliency. The Dolder sleeve is only indicated for the Dolder Bar.

Procedures for three types of bars are provided—note the bar icons:
- Green for the plastic bar,
- Gold for the gold bar, and
- Gray for the titanium bar.

Phase 2: CLINICAL — Tooth Preparation & Impression

1. See Endodontic Posts Preparation and Impression (Moser Post Pg. 35)

Phase 3: TECHNICAL — Model Fabrication

1. Review the prescription, impression. Check that the castable posts are enclosed.
2. Pour the impression, pin the models, trim the dies, and mount the casts.

Phase 4: TECHNICAL — Bar Fabrication — 3 OPTIONS

1. Wax the root copings with the plastic Moser Posts in place. Fabricate a matrix or index of the TSU (Temporary Set-Up) (A). Use the matrix from the buccal or lingual as a guide to position the bars to prevent overcontouring the restoration (B). Whenever possible, the bars should be positioned in straight sections, not bent in a curve (C, D, E). The plastic Hader-EDS bar can be shortened from the gingival aspect if there is not enough occlusal clearance. Do not reduce beyond round section.
2. Wax the plastic bars directly to the copings. Do not connect the sprue to the bar. Sprue to the copings.
3. Invest, cast and finish the coping/bar assembly. A hard alloy should be used.

OPTION 2: Gold Bars (Soldering & Laser Welding)

1. Wax the root copings with the plastic Moser Post in place. Contour coping for solder joint with Hader-EDS gold bar.
2. Invest cast and finish the copings.
3. Cut the gold Hader-EDS bar and use the TSU with the matrix to determine the correct placement. This prior planning will result in better esthetics and comfort for the patient. (A, B)
4. Lute the bar with pattern resin to the coping. The bar can be adjusted from the gingival area. Do not modify the round section.
5. Remove the bar and coping assembly and place in soldering investment. Use minimum amount of soldering investment. Excessive investment requires excessive heat which could damage the gold bar.
6. Burn out resin. Use 650 or lower temperature gold solder. Solder and allow to bench cool. The Hader-EDS bar is made of Elitor Alloy and is self-hardening. (Melting Range: 1650-1795 F) The Gold Hader-EDS bar can also be Laser Welded to the copings. Follow Laser Welding instructions from the manufacturer.
7. Finish coping bar assembly.

Note: If the roots are divergent, a custom made screw bloc design is required with the bar segment fabricated in 2 or more units. (F)

procedures continued next page
**Overdenture Procedures**

**Bar Type-Metal Riders**

Parts refer to pages 108-113

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**CBS, CM-Rider, Dolder Bar & Sleeve and Ackermann Clips** cont.

**OPTION 3: Titanium Bars (Laser Welding)**

1. Wax, invest and cast copings in titanium.
2. Deflask and finish copings.
3. Laser Weld the titanium bar to the titanium copings.
4. Follow Laser Welding instruction from the manufacturer of the Laser Welding unit.

**Phase 5: TECHNICAL — Soldering Gold Bar to Porcelain Crowns**

**Note:** If you plan to connect a gold Hader-EDS bar to porcelain crowns make sure you follow the primary and initial procedures.

1. After the porcelain crowns have been made, cut the gold bar to the length and height required. Verify the position of the bar utilizing the TSU and matrix as a guide. (This is especially critical for patient removable anterior bridgework.) (A, B)
2. Wax the bar to the crowns (G). Make a plaster occlusal index of the crowns and bar assembly (H). Remove index and crowns from the master model. Insert crowns and bar into the plaster index and apply pink wax over the porcelain and into the soldering joints (J). Crowns and bar should fit index freely with no resistance.
3. Invest the crown bar assembly in soldering investment. Do not over invest (K). Boil out soldering block—index should come off freely. Dry-out the investment, add some flux and a small amount of solder to the assembly. Bring it up to melting temperature of the solder under vacuum, hold it for 30 seconds and relieve vacuum. Remove assembly from the oven. Let it cool, the Hader-EDS gold bar is self-hardening. We recommended that you consult with the porcelain and alloy manufacturers if you are not sure what soldering temperatures should be used.

**Phase 6: CLINICAL — Try-in of Coping Bar Assembly**

1. Try in the copings or copings/bar and the TSU.
2. Make any necessary adjustments.
3. If the assembly does not fit passively, cut it close to the coping. Use a slim disk.
4. Request the patient's approval of the final TSU.
5. Return the master model and the TSU to the technician as well as any written information regarding changes.

**Phase 7: TECHNICAL — Processing Riders, Clips and Sleeves**

1. Review the new prescription and check the model and set-up. Make sure everything is returned to you.
2. The critical aspect is the block-out of the sleeve, rider/clip. As the clips, riders and sleeves have adjustable retention, the buccal and lingual area of the sleeve, rider or clips MUST be blocked out up to and past the height of contour. (Figs. L-R)
3. Seat a spacer over the bar and place the sleeve, rider or clip over the spacer and bar. Block out all other undercuts and gingival parts of the sleeve, clip/rider. This can be done with a small amount of stone covered by Bio-Sep or liquid Latex (Rubber-Sep). In most cases you may need to block out over the bar section if vertical resiliency is required.
4. Seat the set-up on the model. If it does not fit, remove the wax or grind the teeth around the area of the bar and clip until it seats completely.
5. Seal the set-up to the master model, invest and boil-out the wax. If the spacer and riders have loosened, reposition them in the original position.
6. Block-out any other undercuts that are clearly visible. Process case and finish acrylic. Do not use injection processing as it may displace the riders/clips or sleeves.
7. Provide the dentist with the order numbers for the bar and clips.

*procedures continued next page*
Phase 8: CLINICAL — Delivery to Patient

1. Check the prosthesis and the copings. Call the technician immediately if there are any questions. Let her/him know how well their technical skill makes your job easier. (We all appreciate compliments once in a while and this can only benefit the business relationship).

2. Seat the bar restoration. There should be a small space between the bar section and the tissue for better hygiene.

3. Check function of the restoration and adjust occlusion if required. You may activate or deactivate the retention. The Activation Instrument #97-510125 (3 adjusting blades) works with all metal clips/riders and sleeves.

4. Record the orders numbers of the bar and clips.

The procedures discussed in the Attachment & Implant Reference Manual is only guidelines. Many alternatives exist for the completion of a successful attachment or implant restoration.