TIPS FROM OUR READERS

Metal framework design for a partial removable dental prosthesis to enhance the addition of an artificial tooth or clasp

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When designing with a metal framework, modifications after the loss of remaining teeth and their replacement can be difficult. This metal framework design makes it easier to add artificial teeth or clasps to a partial removable dental prosthesis.

PROCEDURE

Design

1. Fabricate the definitive cast by pouring the impression with Type IV dental stone (Velmix; Kerr Dental).
2. Draw the outline of the framework design on the definitive cast and indicate this outline on the work authorization.
3. Expand the minor connectors in the cervical direction with a meshwork at the level of the remaining teeth that may need replacing in the future as follows:
   a. For the mandibular arch, finish 2-mm occlusal to the lingual sulcus (Fig. 1A).
   b. For the maxillary arch, join the meshwork to the palatal major connector of the framework (Fig. 1B).
4. Space the meshwork 0.8 mm from the surface of the definitive cast. This spacing enables the acrylic resin (Probase Hot; Ivoclar Vivadent AG) to surround the entire portion of the meshwork during denture packing (Fig. 1C).

Repairs

1. Make an impression (Aroma Fine Plus; GC Europe) of the seated partial dental prosthesis and pour it with Type IV dental stone (Velmix; Kerr Dental) (Fig. 2A).

Figure 1. A, Lingual design of mandibular framework. B, Palatal design of maxillary framework with meshwork joining minor connector to maxillary major connector. C, Finished partial removable dental prosthesis. Meshwork embedded in acrylic resin.

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2. Adjust the new denture tooth or teeth and/or the new clasp (Fig. 2B).
3. Prepare a gypsum index (Snow White No. 2; Kerr Dental).
4. Gently grind the intaglio surface adjacent to the missing tooth or teeth and drill holes in the acrylic resin in which the meshwork is embedded (Fig. 2C).
5. Maintain the denture tooth and clasp with the stone index (Fig. 2C).
6. Lute the denture tooth and clasp on the partial removable dental prosthesis with autopolymerizing acrylic resin (Probase Cold; Ivoclar Vivadent AG) (Fig. 1D).
7. Polymerize in a heated pressure pot (Adjustable Temperature Pressure Pot; Great Lakes Orthodontics).

REFERENCES

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