

Temporary Replacement of Missing Teeth Using Lingual Retainers

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This article presents a simple and esthetic method for the temporary replacement of missing teeth using bonded lingual retainers.

Procedure

1. At the debonding appointment or a subsequent visit, take an alginate impression, and pour and trim a plaster cast (Fig. 1A).
2. Select an artificial plastic tooth based on the shape of the patient's contralateral tooth, or the other existing teeth, and a dental color scale. Trim and contour the artificial tooth, and position it on the cast (Figs. 1B-D).
3. Bend a lingual retainer from .0215" coaxial wire,¹ adding toe-in and toe-out bends for the missing tooth (Fig. 1E).
4. Cut a horizontal slot into the lingual side of the artificial tooth for insertion of the lingual retainer wire.
5. Lubricate the plaster cast at least an hour be-

6. Closely adapt a low-viscosity condensation silicone impression material over the retainer (Fig. 2A). Cover this with a highly viscous condensation silicone impression putty (Fig. 2B). After the material has set, trim with a blade to remove the undercuts (Fig. 2C).
7. After soaking the cast in hot water for five minutes, remove the impression material with the retainer and artificial tooth attached (Fig. 2D). Sandblast away the remaining light-cured composite.
8. Bond the retainer indirectly using Maximum Cure Sealants A and B^{*2} (Figs. 2E,F).

*Reliance Orthodontic Products, Inc., P.O. Box 678, Itasca, IL 60143.

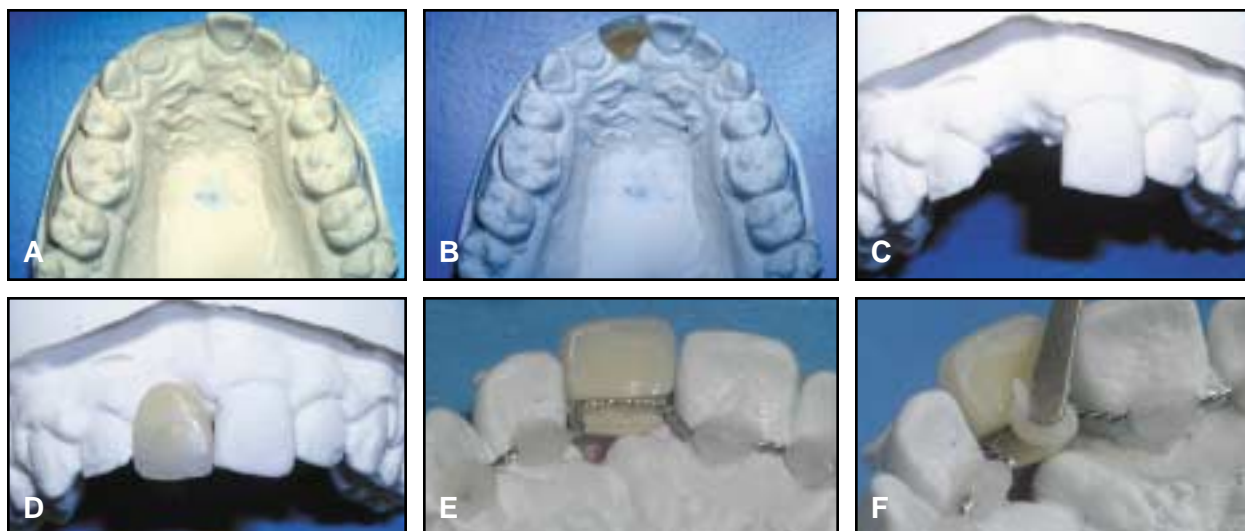


Fig. 1 A. Working cast. B-D. Plastic artificial tooth in place on cast. E. Horizontal slot cut into artificial tooth. F. Artificial tooth bonded to retainer wire.

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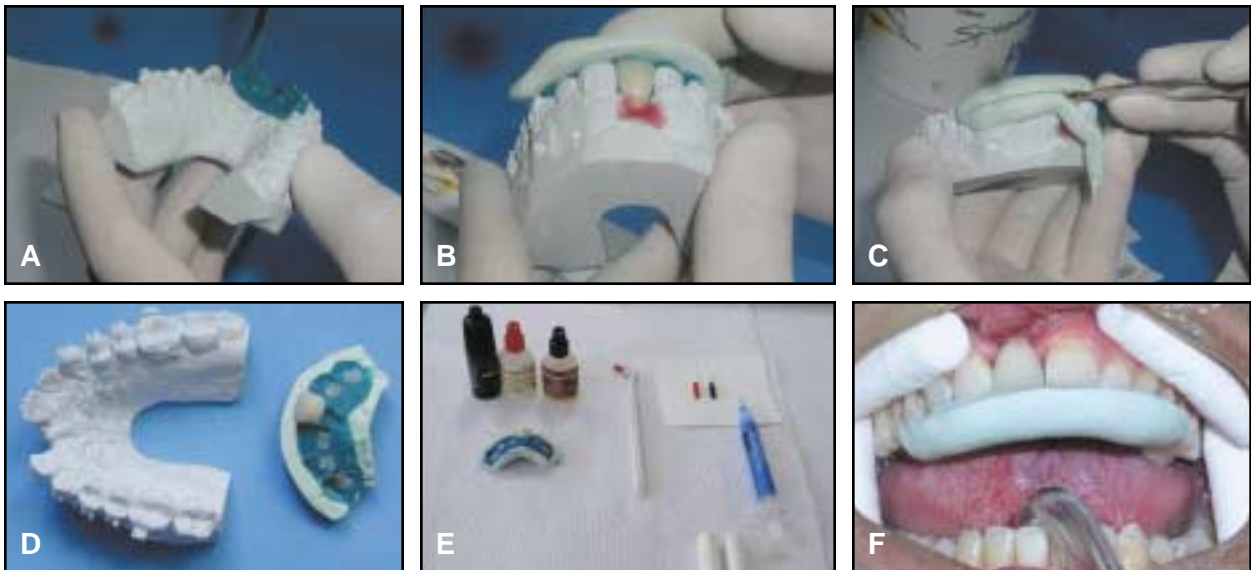


Fig. 2 A. Low-viscosity silicone impression material adapted over retainer wire. B. High-viscosity silicone impression material applied over low-viscosity material. C. Undercuts trimmed from transfer tray with blade. D. Transfer tray removed with retainer and artificial tooth attached. E. Bonding materials. F. Retainer bonded indirectly to anterior teeth.

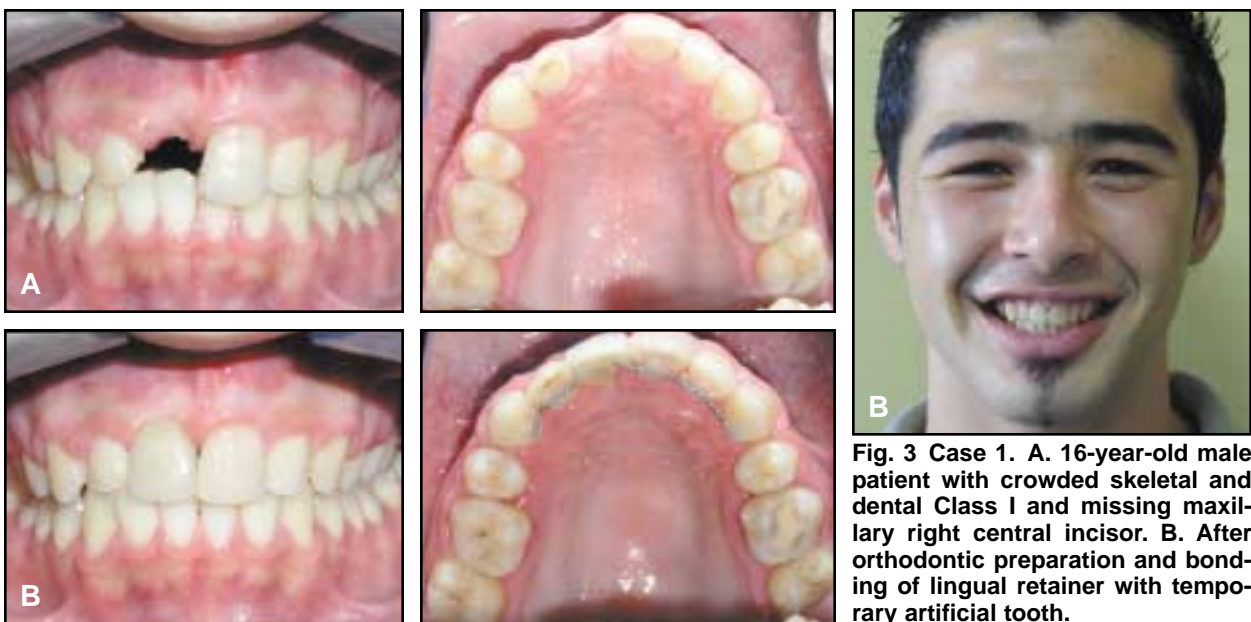


Fig. 3 Case 1. A. 16-year-old male patient with crowded skeletal and dental Class I and missing maxillary right central incisor. B. After orthodontic preparation and bonding of lingual retainer with temporary artificial tooth.

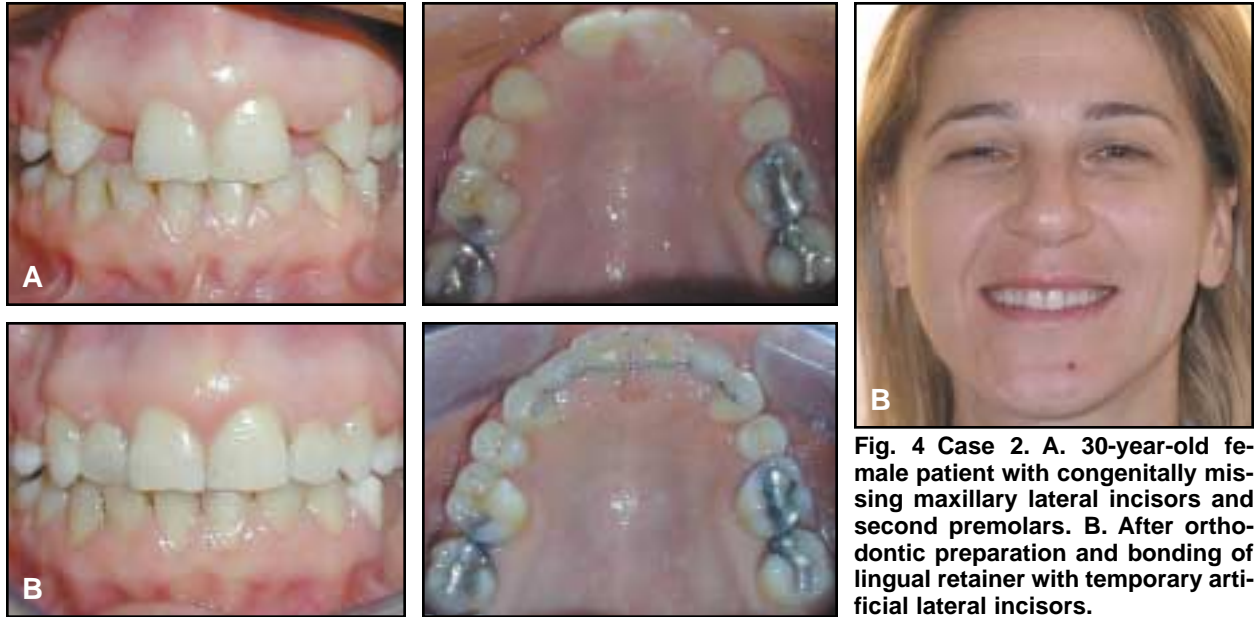


Fig. 4 Case 2. A. 30-year-old female patient with congenitally missing maxillary lateral incisors and second premolars. **B.** After orthodontic preparation and bonding of lingual retainer with temporary artificial lateral incisors.

Case 1

A 16-year-old male patient with a crowded skeletal and dental Class I malocclusion had lost his maxillary right central incisor due to trauma (Fig. 3). During orthodontic treatment, a space was prepared for the missing tooth, but the permanent implant was delayed until the end of growth.³ A lingual retainer with an artificial central incisor was bonded temporarily as described above.

Case 2

A 30-year-old female presented with congenitally missing maxillary lateral incisors and second premolars (Fig. 4). Spaces for the missing lateral incisors were opened orthodontically, while the second premolar spaces were closed by mesial movement of the first molars. At the end of orthodontic treatment, permanent implant placement had to be delayed because the patient was pregnant. A lingual retainer carrying artificial lateral incisors was bonded temporarily.

Conclusion

Bonded lingual retainers with attached pontics are effective temporary replacements for missing teeth. They appear to be more esthetic and comfortable than Hawley retainers with artificial teeth and more practical and inexpensive than prosthetic restorations such as Maryland bridges. They can also be used as temporary prostheses during the osseointegration of permanent implants.

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