A subgingivally fractured incisor presents a restorative challenge. Orthodontic eruption is a good alternative to crown lengthening for restoring the biological width, maintaining the alveolar bone, and restoring esthetics.\textsuperscript{1,2} The technique requires a hook to serve as the attachment system, fixed to the fractured tooth root, and an anchorage bar to allow movement of the root. The bar should not interfere with the occlusion, should be directly above the hook, and should ensure stabilization of the anchored teeth.

The elastic provides the force. The forces must be vertically directed along the long axis of the tooth. With sufficient force, the periodontal fibers are ruptured. Therefore, tooth movement is rapid, and there is no movement of the periodontal tissues.\textsuperscript{3} The eruption described required 1 week.

Figure 1. Maxillary lateral incisor fractured at subgingival level. Elastic between cemented wire hook and rod acts as extrusion device.

Figure 2. Extrusion after 1 week.

Figure 3. Definitive restoration.

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PROCEDURE

1. Remove the existing gutta percha to at least half the depth of the root canal.
2. Bend one end of a steel wire (Wironit-clasp Wire, round, 0.7 mm; Bego) to form a hook and cut the other end to the desired length.
3. Cement the wire in the root canal with resin-modified glass ionomer cement (Fuji Plus Corp; GC America).
4. Cut a length of the same wire to fit the space between the 2 adjacent teeth.
5. Etch and bond the adjacent teeth (Gel Etchant; Kerr Corp) (Prime&Bond NT; Dentsply Intl) and attach the wire with composite resin (Permaflo; Ultradent Products Inc) at a distance from the root that anticipates the required eruption.
6. Put an elastic (Dyna-Link Elastomeric Chain; G&H Orthodontics) on the hook, go around the bar and return to the hook (Figs. 1-3).
7. Complete conventional endodontic treatment before fabricating the definitive restoration (Fig. 4).

REFERENCES


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