Temporary Bite Raiser

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Patients with deep bites or crossbites often need temporary bite opening to prevent mandibular brackets from being sheared off and to allow unobstructed tooth movement. Removable plates require full patient cooperation,[1,2] while restorative materials bonded to the occlusal surfaces of the posterior teeth cannot always withstand the forces of mastication.[3] Fine proposed bonding lingual brackets to the maxillary central incisors, but recommended limiting this technique to Class I or Class II, division 2 cases with minimal overjet.[4] Furthermore, the lingual brackets can be as fragile as the mandibular facial brackets they are designed to protect.

This article presents a simple auxiliary for temporary bite opening.

Fabrication

The temporary bite raiser is made of .040" stainless steel wire (Fig. 1). The mesial and distal ends of the wire are inserted 3-4mm into the tube on the selected maxillary tooth; the occlusal portion is adapted to the tooth's occlusal morphology (Fig. 2). A bend in the lingual portion of the wire is ligated to a bonded lingual button on the maxillary tooth (Fig. 3).

The ligature wire can be cut to allow the occlusion to be checked without removing the entire auxiliary (Fig. 4). The ends of the bite raiser hinge on the molar tube.

Fig. 1 Temporary bite raiser made of 1mm stainless steel wire.

Case Report

A 13-year-old patient presented with a Class I malocclusion with a crossbite in the maxillary left bicuspid region (Fig. 5A). The strong interdigitation of this segment prevented the bicuspids from being tipped to correct the crossbite.

A temporary bite raiser was placed on the maxillary right first molar (Fig. 5B), freeing the occlusion (Fig. 5C), and the problem was resolved within one month (Fig. 5D).

Discussion

The temporary bite raiser can be quickly constructed at chairside and is easy to place and adjust. With minimal modifications, it can be adapted for use with any fixed appliance. It does not depend on patient cooperation, nor does it interfere with oral hygiene.

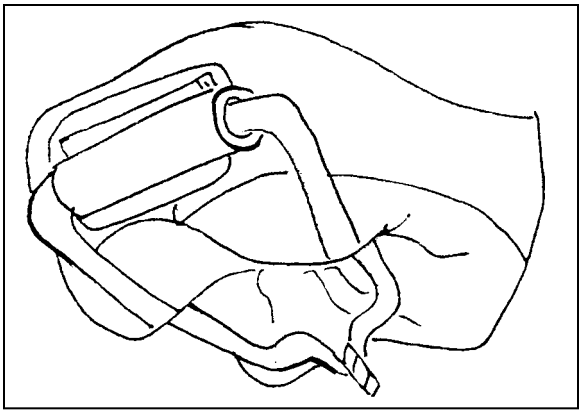

Fig. 2 Mesial and distal ends of wire inserted 3-4mm into maxillary molar tube; occlusal portion adapted to morphology of molar.

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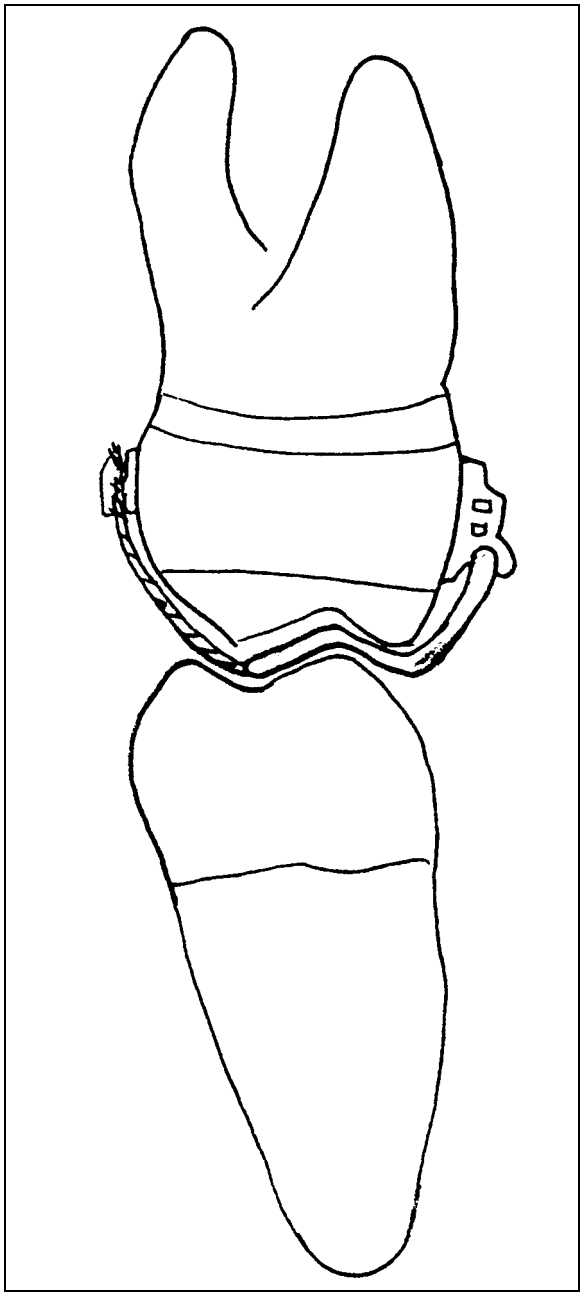

Fig. 3 Bend in lingual portion of bite raiser ligated to lingual button on molar.

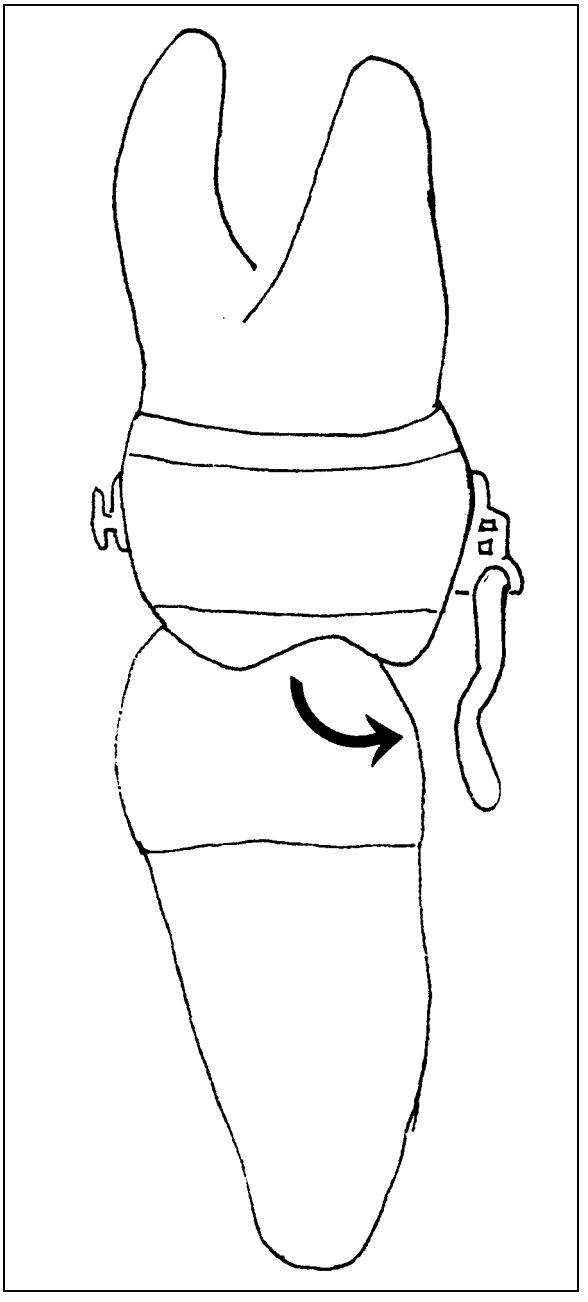

Fig. 4 When ligature wire is cut, bite raiser hinges on molar tube, allowing occlusion to be checked.

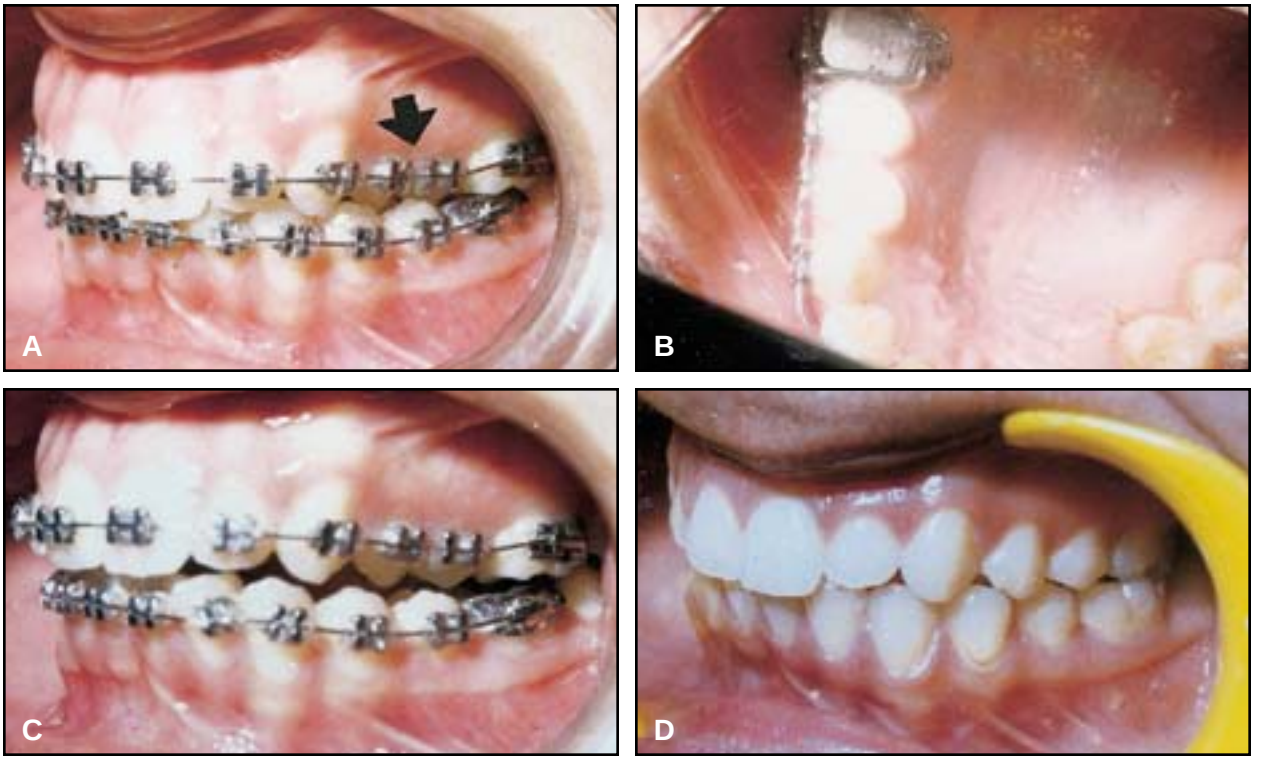

Fig. 5 A. 13-year-old patient with maxillary left bicuspids in crossbite. B. Temporary bite raiser attached to maxillary right first molar. C. Elimination of occlusal contact. D. Crossbite corrected within one month.

Because of its short-term usage, the bite raiser appears to have no adverse effects on maxillary molar positions. Long-term wear might produce some molar intrusion, which could be reversed with appropriate wire bending.

REFERENCES

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