

Case 3:

Class I malocclusion with CR/MIP shift



A 13-year-old patient presented for comprehensive orthodontic treatment with a Class I malocclusion.

During treatment with fixed appliances, a CR/MIP shift developed, characterized by an increase of buccal and anterior overjet, and development of a Class II posterior relationship. Analysis of the progress records, including mounted models, revealed vertical interferences of the palatal cusps of the maxillary



Fig. 3a: Pretreatment occlusion.

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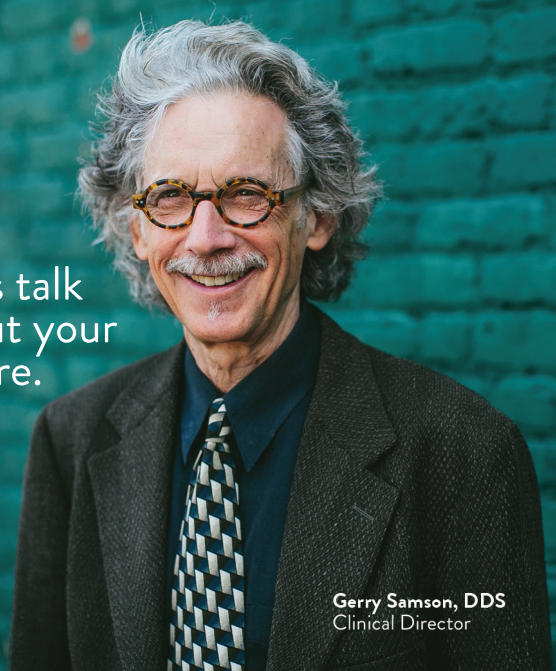
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(continued)

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posterior teeth that were responsible for the CR/MIP shift. TADs were placed, an MTI was fabricated, and intrusion of the palatal cusps of the maxillary posterior teeth was initiated. The occlusion was evaluated at each visit to determine the specific teeth that needed to be intruded to remove the functional interferences.

The occlusion improved significantly as the mandible auto-rotated into Class I and settled vertically. This case further demonstrates the MTI's unique ability to correct vertical orthodontic problems, including CR/MIP shifts, with skeletally based orthodontic mechanics. This process of

sequential removal of occlusal interferences is analogous to adjusting a splint, and familiar to most orthodontists.

Conclusion

The MTI appliance is an effective adjunct to comprehensive orthodontic treatment with fixed appliances or clear aligners. It is useful in cases that benefit from specific torque control of maxillary posterior teeth or in cases that benefit from unilateral or partial maxillary posterior intrusion. ■

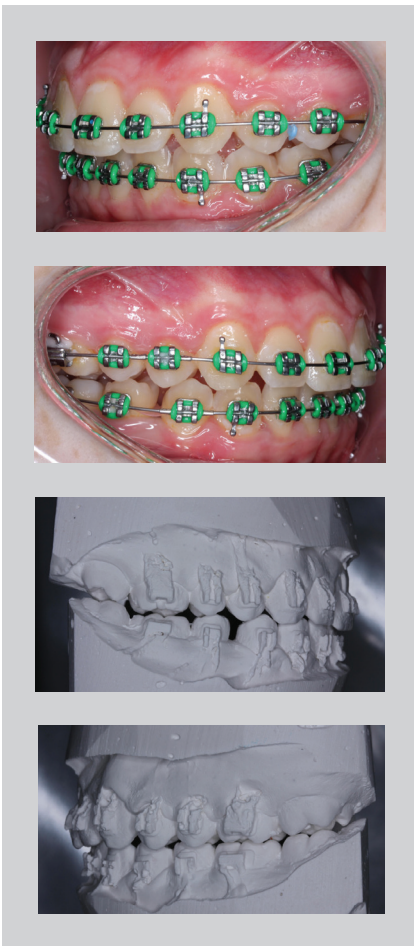


Fig. 3b: Clinical photos and mounted models showing development of CR/MIP discrepancy.

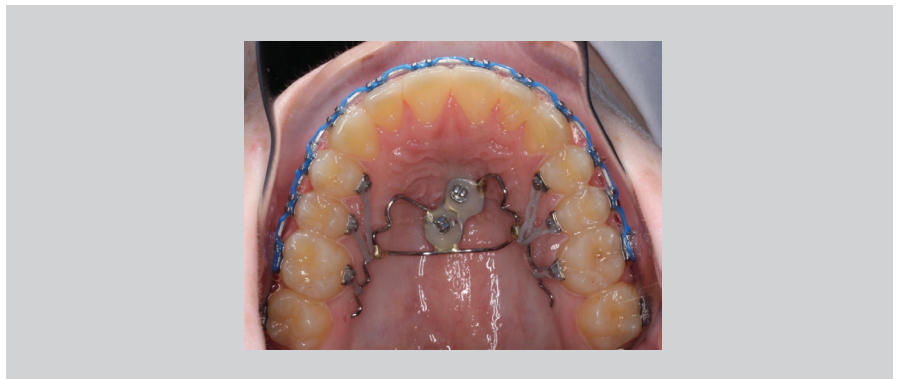


Fig. 3c: An MTI was fabricated to intrude palatal cusps of maxillary posterior teeth and eliminate the CR/MIP shift



Fig. 3d: Final occlusion.