



Miniscrews are commonly placed in the buccal dentoalveolus, mesial to the maxillary first molars, to anchor simultaneous intrusion and retraction of the anterior teeth. This Pearl takes us back to a tried-and-true alternative: a modified transpalatal arch (TPA) with soldered buccal arms in place of miniscrews. The resulting anchorage setup is simple, safe, and effective. What's old is new again.

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Modified Transpalatal Arch for Simultaneous Intrusion and Retraction

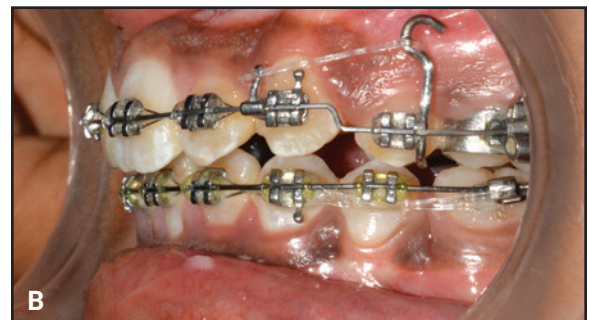
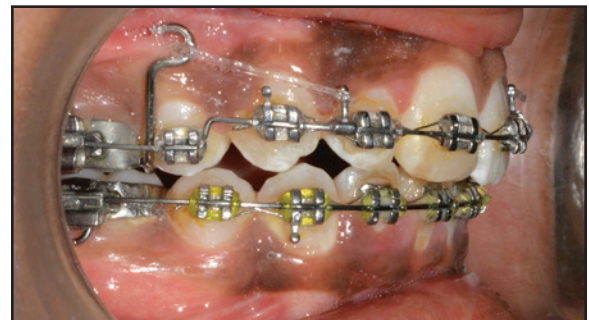
Although miniscrews are now often used for simultaneous anterior retraction and intrusion, they are not without risks. This Pearl describes a simple modification of a traditional TPA that can be used for maxillary anterior retraction and intrusion without the need for miniscrews.

Buccal arms made of .036" stainless steel wire are soldered to the posterior ends of the TPA. Each arm crosses over the occlusal embrasure between the second premolar and first molar, then passes beneath the archwire, ending in a hook facing distally (A). Extending the arms from the palatal side adds durability and preserves the buccal molar tubes. The vertical dimension of the arms will depend on the patient's vestibular depth and the location of the buccal frena, but an approximate guide would be the level of the mucogingival junction.

Simultaneous retraction and intrusion forces are applied by connecting elastomeric chains or nickel titanium coil springs from the hooks on the buccal arms directly to the archwire (B). An arm can easily be bent buccally if a chain or spring

impinges on the gingiva. Composite resin turbos can be placed on the first molars if necessary to avoid occlusal contact with the buccal arms.

This method is economical, comfortable, and noninvasive, applying miniscrew anchorage mechanics to a modified conventional appliance for simplicity and patient safety.





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