

TECHNIQUE CLINIC

A New Fixed Biteplane

This article describes an effective, hygienic, fixed discluding appliance that we have named the “Nano” biteplane because of its small size.

Appliance Fabrication

Take an impression, preferably in polyvinyl siloxane for optimal accuracy. Position preformed first molar bands on the working cast. Adapt an .019" × .025" stainless steel wire in a zigzag configuration (A) to the occlusal surface of each molar,

and solder the ends of the wire to the band on the lingual side (B). Soldering at just two points provides sufficient bond strength and minimizes the bulkiness of the appliance, leaving the buccal side of the band free for other attachments if needed.

Press clear acrylic into the wire mesh until it contacts the entire occlusal surface of the model tooth and completely surrounds all of the zigzag wire surfaces. Once the acrylic has been built up to the required height for disclusion, it is fully cured, then



trimmed and polished (C).

The appliance is shown here in a 10-year-old male who presented with a malaligned maxillary right central incisor and a high-angle traumatic bite (D). After the contacts of the biteplanes against the maxillary posterior teeth were checked with articulating paper to ensure sufficient clearance in the anterior region, the bands were cemented in place (E). Alignment of the maxillary incisors was completed in 10 weeks using an overlay wire, and the biteplanes were removed immediately after alignment (F).

Discussion

The "Nano" biteplane has proven simple, reliable, and effec-

tive in either arch; it is especially useful in uncooperative patients and in high-angle cases. To prevent overeruption of adjacent posterior teeth in vertically growing patients, the biteplane should be modified to include more of the posterior teeth if it must be used for more than four weeks.

Both adults and adolescents tolerate the biteplane well, usually requiring only a few days to adapt in speech and chewing. Patients should be advised to maintain excellent oral hygiene and to use a mouthrinse after every meal. The transparent acrylic of the biteplane allows better monitoring of hygiene and of any problems that may occur on the occlusal surfaces of the posterior teeth.



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