

**A Technique for Stabilizing the Canine after 'Distraction'**

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During the past decade rapid canine distalization through distraction osteogenesis has gained considerable importance because it significantly reduces the time needed for canine retraction.<sup>1-3</sup> However, while retracting the incisors varying degrees of anchorage loss has been noted, not to mention the increased tendency of the canines to migrate back into the distraction site. The latter may result from forces produced by the stretched transseptal fibres. This has prompted a few investigators to suggest an increase in the consolidation or stabilization period of the canine, following distalization.<sup>3</sup>

However, this would not only delay the initiation of fixed appliance therapy (and incisor retraction), but also increase the duration the patient wears the distractor. This would further accentuate the problems related to; oral hygiene, speech, mucosal irritation and appearance.

In this report we describe the fabrication of a simple appliance which stabilizes the canine after distraction and is also helpful in the immediate retraction of incisors.

### **Appliance Fabrication**

1. After canine distalization the distractor is removed and the bands reseated, but loosely.(Fig 1)
2. An impression is taken, the bands are transferred into the impression material and a study cast is obtained.(Fig2)
3. A 01.25 mm round stainless steel wire is adapted in close configuration with the bands of the first molar and canine. A wax spacer can be used to keep the wire away from the palatal surface.(Fig3a,b)
4. The stainless steel wire is then secured on the working cast and the terminal ends soldered to the bands.
5. The stabilizer is then carefully removed from the cast and cemented in the patient's mouth.(Fig 4,5a,b)



Fig. 1



Fig. 2



Fig. 3A



Fig. 3B



Fig. 4



Fig. 5A



Fig. 5B

### **Discussion**

Liou et al<sup>4</sup> have demonstrated in mature beagles that the best time to initiate tooth movement is immediately after distraction when the edentulous space is still fibrous and bone formation is just starting. After tooth extraction, regenerative bone tissue usually takes 3 weeks to refill the extraction socket and becomes resistant and solid only after a period of 3 months.<sup>5</sup> During this time the stabilizing device suggested can be effectively used to stabilize the canine while incisor retraction can be initiated immediately by using skeletal anchorage as shown in (fig 6a,b,c).

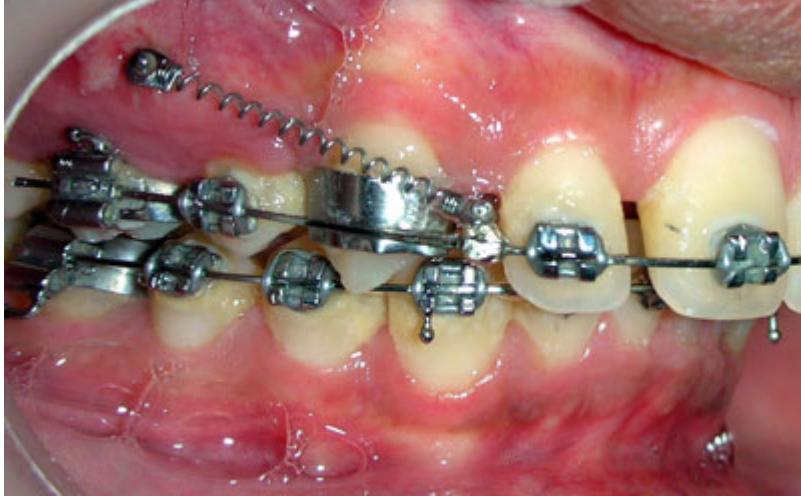


Fig. 6A



Fig. 6B



Fig. 6C

This approach would not only reduce the risk of anchorage loss but also save treatment time by not having a separate consolidation period. Also, the tooth movement will be faster since the bone resistance is less. The other advantages of this technique are:

- Unobtrusive to any labial mechanics
- Easy to fabricate
- Requires less chair time as most of the work is done in the lab
- Highly esthetic
- No associated speech problems.

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