

CLINICAL INNOVATION INNOVATIVE TECHNIQUE TO ENGAGE ELASTICS ON ARCHWIRES FOR ANTERIOR INTRUSION WITH TADS

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ABSTRACT

The aim of the manuscript is to introduce a new simplified method to substitute crimpable hooks on archwires to engage vertical elastics for intrusion of anterior teeth using Temporary Anchorage Devices (TAD).

J Odontol Res 2019;7(1)45-7.

INTRODUCTION

In orthodontics, intrusion of anterior segment is commonly done to correct gummy smile and deepbite due to vertical maxillary excess.¹ With the introduction of Temporary Anchorage Devices (TAD) like miniscrew implants into orthodontics, intrusion of anterior teeth has become a simpler and a more effective method compared to intrusion arches.² TADs provide skeletal anchorage and true intrusion of anterior teeth take place with minimal counter forces acting on the posterior segment.^{3,4} However, engaging vertical elastics on straight archwires for anterior intrusion is limited to a few techniques, of which, crimpable hooks being the popular one.⁵

Some of the disadvantages experienced by clinicians while using crimpable hooks are

- Low stability
- Sliding of the hooks within the archwire
- Distortion of the archwire
- Breakage while engaging elastics
- Tissue injury to the labial mucosa

PROCEDURE

This simplified technique is a modification of canine loops used in Begg's appliance.⁶ In this method, a loop is made on the rectangular archwire, such that the loop lies on the occlusal aspect between the canine and lateral incisor.

Positioning the loop on the occlusal aspect of the archwire helps in engaging the vertical elastics with ease and with minimal tissue irritation to labial mucosa.

Engaging the vertical elastics directly to archwire minimizes the undesired labial tipping of the anteriors and a true intrusion of the anteriors takes place.

This method can also be used for the intrusion of the mandibular anteriors. But, the loops have to be of minimal size in order to prevent any occlusal interferences.



Figure 1: Intraoral photograph showing vertical elastics engaged from TADs to archwire



Figure 2: Intraoral Photograph showing the loops incorporated into the archwire to engage the vertical elastics.

CONCLUSION

This simplified technique was proposed to substitute the use of crimpable hooks on archwires to engage elastics for the intrusion of anterior teeth using TADs. With this technique the undesired effects of crimpable hooks can be avoided which makes it comfortable for both the clinician and the patient.

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