



CASE STUDY

A NEW METHOD TO PROCLINE RETROCLINED UPPER INCISORS FOR CLASS II DIV 2 MALOCCLUSION CORRECTION WITH NON-EXTRACTION APPROACH

*Dr. Luv Agarwal

Saraswati Dental College, Mds 3rd yr postgraduate

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ABSTRACT

Class II division 2 malocclusion is a distinct category of malocclusion with a high tendency of familial inheritance. It is characterized by the permanent mandibular incisors which occludes posterior to the cingulum plateau of retroclined permanent maxillary incisors. This gives rise to a reduced overjet & frequently in increased overbite. Here, in this article a new method is described to create the space for the alignment of upper incisors for class II Div 2 correction.

INTRODUCTION

Clinically, the permanent maxillary central incisors are retroclined and the maxillary lateral incisors are proclined and mesiolabially rotated. However, all four permanent maxillary incisors may be retroclined with or without facially displaced & proclined permanent maxillary canines (Nicol, 1963; Posen, 1972). The relationship of the labial soft tissues to the permanent maxillary incisors has been considered as the principal etiological factor in the development relapse of Class II division-2 malocclusion. The treatment objectives are to correct the crowding of anterior teeth and the deep overbite and to obtain optimum overjet and overbite (Mills, 1973; Fletcher, 1975; Luffingham, 1982; Karisen, 1994).

Traditionally, multiple loop arch wire or wire with U loops was used to correct crowding and procline upper incisors in class II Div 2 malocclusion. Most of the time, patient reports with debonded central and lateral incisors brackets, thus delaying the treatment.

Technique

A new and simple method for correction of retroclined upper incisors is presented and as follows:

- Upper central incisors are retroclined and according to space analysis, there is not adequate space to bring them forward (Fig. 1).
- The whole upper arch is bracketed except retroclined upper central incisors and leveling and aligning is done in the upper arch and a sleeve is placed from mesial contact of upper lateral incisor of one side to mesial contact of the other. This is done to preserve the space for the unbracketed upper central incisors (Fig. 2).
- When the leveling and aligning is done and wire progresses from Niti to stainless steel wire, then Niti open coil spring is used and engaged on stainless steel wire from mesial of lateral incisor to mesial of other side to create space for maxillary central incisors. Maxillary central incisors are figure of eighted and connected by a short segment of stainless steel wire which is ultimately joined to main stainless steel wire by ligature wire (Fig. 3).



Figure 1. A class 2 Div 2 malocclusion with retroclined upper central incisors



Figure 2. A sleeve placed from lateral incisor of one side to lateral incisor of other with central incisors unbracketed



Figure 3. 16 x 22 SS ligated with open coil spring



Figure 4. Space is created for the alignment of central incisors



Figure 5. Whole arch is leveled and aligned with 17 x 25 stainless steel wire

- Once the space is created, co-axial wire is tied in the upper arch to align the maxillary incisors (Fig. 4).
- When the maxillary incisors are completely aligned, use reverse curve of spee to open the bite and bond lower arch (Fig. 5).

DISCUSSION

Initially, it is difficult to create the space and open coil spring cannot be used in the initial leveling Niti wire stage as chances of loss of tooth control is always there. Therefore, once the treatment reaches stainless steel wire stage, coil spring is used and space is opened to procline maxillary central incisors and ideal overjet and overbite is created.

Conclusion

This technique has been found to be very simple and less time consuming. This method is basically useful for the cases; where sufficient space is not available to procline the maxillary incisors and adequate space need to be created.

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