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SHORT COMMUNICATION

Ligation of Blocked-Out Incisors Simplified

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ABSTRACT

Ligation of archwire into bracket by conventional method when the incisors are lingually or palatally placed is cumbersome, time consuming and is even worse when there is vertical discrepancy between the slots of adjacent brackets. In this article, we suggested a new method of ligating the blocked-out incisors. This method can also be used effectively to ligate the lingually tipped tooth due to bond failure during retraction phase.

Keywords: Archwire ligation, Blocked-out incisors, Twin bracket.

INTRODUCTION

In day to day practice, using conventional preadjusted edge-wise system, orthodontists commonly face the problem of completely ligating the archwire into the bracket of blocked-out tooth, which can turnout to be tiresome and time consuming.

Various methods of tying the archwire to Siamese twin brackets, both by steel and elastic ligature ties, for normal[1] and severely rotated teeth,[2] and tying of bracket to sectional archwires[3] are discussed earlier. But ligation of archwire to lingually or palatally placed incisors is seldom discussed.

This article describes a simple technique to ligate the blocked-out teeth with elastomeric ring and ligature wire, leading to efficient movement of blocked-out tooth and full engagement with archwire as early as possible.

PROCEDURE

In this technique, a ligature wire 0.010 inch of 2 to 3 cm in length is placed vertically on the bracket parallel to the long axis of the tooth and elastomeric ring is placed over the ligature wire engaging all the wings of the bracket (Fig. 1), then two free ends of the ligature wire are stretched and tied to the archwire (NiTi or stainless steel) (Figs 2 and 3). Alternatively, the

Fig. 2: Free ends of ligature wire engaging the archwire

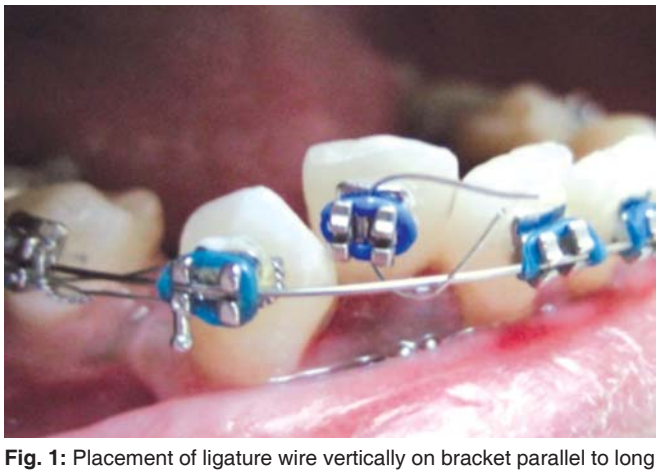

Fig. 1: Placement of ligature wire vertically on bracket parallel to long axis of tooth, and elastomeric ring is placed over ligature wire engaging all wings of the bracket

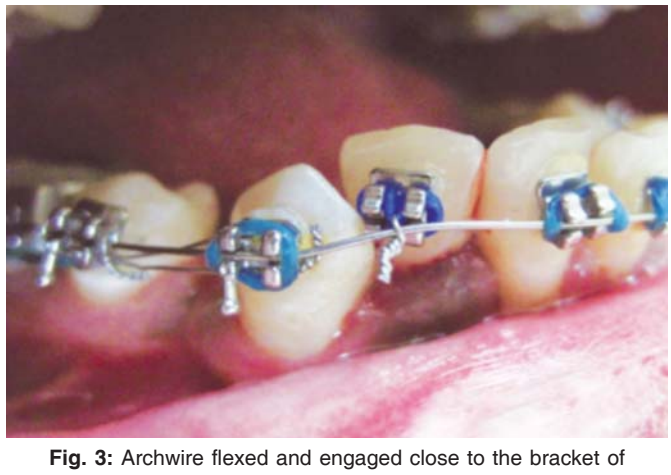

Fig. 3: Archwire flexed and engaged close to the bracket of lingually placed incisor

Fig. 4: Vertical discrepancy between slots of adjacent bracket

Fig. 5: Archwire engaged into slot by conventional method after few weeks of tooth movement

elastomeric ring can also be placed in figure of eight pattern. In few weeks the archwire can be fully engaged in the bracket (Fig. 5).

DISCUSSION

In cases of lingual blocked-out incisors, it becomes difficult to fully engage the archwire in the slot. Orthodontist may choose to use a thinner/flexible wire or sometimes risk a bond failure due to heavy force while engaging the bracket.

In situations where the interbracket distance between canine and lateral is less, it is difficult even for shape memory wires to get engaged into the bracket. This is even more worsened when there is vertical discrepancy between the slots (Fig. 4). Even if a heat-activated NiTi wire is squeezed into the slot there is disadvantage of exerting excessive force thereby loosing control over force delivery.

In retraction phase, we commonly encounter lingual tipping of the teeth due to bond failure of the bracket where stepping down the gauge of the wire is required for the alignment of the teeth, which further delays the treatment time. In such cases retraction can be continued simultaneously without the need to step-down the size of archwire.

CONCLUSION

This technique is easy and efficient to bring malposed incisors quickly into proper alignment and uses materials that are available in every orthodontic clinic.

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