Lingual Retainer Stabilized by Modifying Archwire

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ABSTRACT

Improper method employed to bond permanent lingual retainer results in clinical problems. A simple, convenient and cost-effective method is being suggested to bond permanent lingual retainer. This method involves the use of stainless steel archwire. Construction involves making a V-shaped bend on either ends of the archwire. The tag arms on this archwire pass on the lingual aspect and hold the retainer wire passively, thus, allowing easy and effective retainer wire stabilization.

Keywords: Lingual retainer, Archwire, Bonding.

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INTRODUCTION

Many problems are encountered due to lack of proper method for stabilization of lingual retainer wire such as high point resulting in occlusal interference, gingival hygiene maintenance problems, frequent debonding of the permanent retainer and increased chairside time. Different techniques have been suggested in past to overcome these problems for precise bonding of lingual retainer. The method, which is suggested here, consists of modifying stainless steel archwire to stabilize lingual retainer.

Steps in Construction

1. The wire to be used as a permanent lingual retainer is adapted properly on the cast as shown in Figure 1.
2. If the extent of the permanent retainer is desired to be from canine to canine, a 90° bend is given in 0.019’ × 0.025’ stainless steel wire or the last stainless wire (round or rectangular of at least 0.014’) used in patient near the interdental area between lateral incisor and canine. The bend can be modified by placing it mesial to the last teeth to be included on the either side depending on the extent of permanent retainer as shown in Figure 2.
3. Another bend is now placed such that the length of vertical arm is 7 to 8 mm approximately and the construction of the wire is completed by bending the retentive tags in the archwire, which extends lingually. Figure 3 shows the lateral view of the archwire. The length of the vertical arm depends on the crown height and the vertical position of the bracket.
4. Minor adjustments are done in the end of the archwire for proper adaptation of the lingual retainer so that the retentive tags in the archwire secure the retainer wire firmly but passively. Figure 4 shows the archwire used to stabilize lingual retainer.
5. After preparing the lingual surfaces of the teeth, secure the retainer wire by bending them as necessary and keep the retentive tags away from the bonding areas. Complete the bonding procedure as usual.
Bending of one archwire requires not more than 2 minutes. The Figure 5 shows the permanent retainer bonded with the stabilization from the archwire. The archwire is now ready to be removed from the patient’s mouth. This technique is used with the patient’s own wire without much dimension criteria’s, moreover it is relatively easy, thus it is a simple and cost-effective method for stabilization of lingual retainer in the office.

REFERENCES