

Customised Indirectly Direct Lingual Retainer

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ABSTRACT

After orthodontic treatment, certain cases have a high potential of relapse. These cases invariably require fixed retainers for an extended duration of time. Most of these cases require bonding of retainer after the accidental breakage of direct bonded lingual retainer, replacing it becomes difficult but it still is an absolute must. Hence an easy, convenient, economic & less time consuming indirectly direct method of bonding fixed lingual retainer is hereby prescribed.

KEYWORDS: Lingual Retainer, Direct Method, Indirect Method, Fixed Retainer

INTRODUCTION

The Success of orthodontic correction depends on the stability of achieved results and prevention of relapse. One of the most primary & primitive objective to be followed in any orthodontic treatment is the stability of results thus obtained for the entire life time of the patient. Without achieving this, ideal function / ideal esthetics, or both, may be permanently lost.

On completion of orthodontic treatment, most of the cases which have been completed by long duration of tooth movement have a considerable chance of relapse. Hence to achieve stable retention & long term durable results these cases invariably require fixed lingual retainers for an extended duration of time. Most of these cases require bonding of retainer after the accidental breakage of direct bonded lingual retainer, replacing it becomes difficult, but it still is an absolute must.^{1,2}

In recent years, the bonding of fixed lingual retainers has evolved through various direct and indirect techniques, basically which involve using of various cross sectional diameter and alloy of wires for this purpose¹. The indirect method requires an elaborate laboratory procedure for holding the retainer wire on teeth surface for bonding^{3,4}

During the direct bonding procedure, for appropriate adaptation to the lingual contour of teeth, the retainer wire used has to be prefabricated on the patients cast before actually using it in vivo. For this to be carried out successfully, many ways of holding the wire on the lingual anatomy of the teeth have been in use. This retainer wire may be held using a finger (operators / assistants), dental floss, orthodontic elastics ligatures, ligature tack welded to the retainer wire, & so on. But all these methods have certain shortcomings inherent in them.^{5,6} To overcome these problems a new technique has been proposed here.

TECHNIQUE

1. Take an impression of the arch before debonding and prepare a working model.
2. Trim off the teeth from the cast in the lab. (usually

- done by lab assistant / lab technician)
3. 0.010" ligature wire or co-axial wire is twisted & is adapted onto the patients working model along the entire length of lingual contour of the teeth as it needs to be done in the patient mouth & stabilized using sticky wax / modelling wax. (usually done by lab assistant / lab technician) (figure 1).



Fig 1: Retainer wire stabilised in anterior region with sticky wax / bees wax

4. Use self-cure acrylic in the premolar region to stabilize the retainer. (figure 2)
5. Debond the labial appliance, Pumice and polish the lingual surface of teeth on which retainer is to be bonded.
6. Try in the final fit of the twisted 0.010" ligature wire or co-axial wire prepared by the assistant in the patient's mouth and adjust only if necessary. (Which usually will not be required if the assistants wire bending is proper !!)
7. Prepare the enamel surface for bonding as it is done in a conventional way.(etching + priming)
8. The Lingual retainer is removed from the cast &

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Fig 2: Retainer wire stabilised in premolar region with self-cure acrylic resin

placed in the patient's mouths. It adapts well due to the mould action formed due to the self-cure acrylic. (figure 3)



Fig 3: Retainer wire transferred into patients mouth

9. This Retainer wire is now stabilised with appropriate amount of an adhesive. Cure the adhesive to set. (figure 4)



Fig 4: Retainer wire light cured

10. Cut the ligature wires at the mesial end of self-cure acrylic resin. (figure 5)
11. This acrylic resin mould can be preserved along with patients other records & can be reused in case the patient returns with a broken retainer.

12. Instruct the patient to maintain the oral hygiene. & another post debonding / retainer instruction are given before seeing off the patient.



Fig 5: Excess wire mesial to the acrylic resin is cut with pliers

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