Modified Kesling’s separators for stabilizing lingual retainer wire

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Abstract
Here we are introducing a modified Kesling’s separators for stabilization, adaptation and proper positioning of lingual retainer wire prior to bonding. This placement technique of modified Kesling’s separator eliminate contamination of etched surfaces before bonding and allows the clinician to ensure the occlusion and adjust the retainer wire to avoid occlusal interferences before the bonding.

Keywords:
Lingual retainer, fixed retainer, bonded retainer

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Introduction

The use of fixed lingual retainers in orthodontics is increasing, and the various options are now available to the clinician to allow more differentiated retention than ever before. Bonded retainers have advantages compared to more conventional removable retainers in that they are invisible from the front, require less patient cooperation, and provide long-term retention more safely and predictably than removable plates with wire assembly.

Bonding of an upper or lower fixed lingual retainer is a common procedure carried out in orthodontic practices. Stainless steel wires of different sizes and shapes are the most frequently used material for fixed orthodontic retainers. The retainer can be constructed in a dental laboratory, made at chair side, or it can be purchased in prefabricated form. All three methods of creating a fixed retainer are acceptable. However, the method of holding the retainer wire in place adjacent to the lingual surfaces of the teeth before proceeding with the bonding process remains a problem for some practitioners.

Accurate placement of lingual retainers requires meticulous stabilization of wire during bonding procedures. Various methods have been advocated for stabilizing lingual retainers including use of rare earth magnets, GIC hooks, etc.

Here we have introducing a modified conventional Kesling’s wire separator to stabilize lingual retainer wire. The aim of this article is to introduce a simple method that enables clinicians to stabilize the retainer wire in place with good adaptation against the lingual surfaces of the anterior teeth and check for any occlusal interference before the bonding procedure is carried out.

Modified Kesling’s separator:

Kesling introduced wire separators for slow separation in area offering tight contacts. The conventional Kesling’s separator was modified by incorporating a perpendicular bend in lower arm to form a ‘U’ (Figure 1). The U would exert pressure on lingual retainer wire against palatal tooth surface.

Technique:

1. A canine to canine 0.0175” coaxial wire was adapted on palatal surface of cast.
2. Modified Kesling’s separators were fabricated using 0.014” AJW Special plus wire and checked on the cast. (Figure 2)
3. A canine to canine figure of eight ligature tie was placed in order to prevent interdental space opening due to force exerted by separator. (Figure 3)
4. After pumicing, etching and conditioning, lingual retainer wire was
stabilized on palatal surface using modified Kesling’s separators. (Figure 4)

5. Composite was applied and cured to bond lingual retainer onto tooth surface. Kesling’s separators were removed thereafter. (Figure 5)

**Advantages:**
- Simple and economical technique.
- Chair-side time is reduced.
- Easy to fabricate and use.
- Eliminates use of expensive materials.
- Comfortable to patients.

![Figure 1: Modified Kesling’s separators.](image1)

![Figure 2: Modified Kesling’s separators with lingual retainer wire on cast.](image2)

![Figure 4: Modified Kesling’s separator in use for stabilizing lingual retainer wire.](image4)

![Figure 5: Bonded lingual retainer in place.](image5)

**References**


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