Prior Fabrication of Removable Acrylic Retainer for Immediate Delivery on Debonding

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Abstract

The time-lapse between fixed orthodontic appliance removal and insertion of the removable retainer plays a crucial role in retention. Often there might be a delay in the laboratory procedures for the construction of removable acrylic retainers that might be associated with relapse of the achieved corrections. Here, we describe few simple steps prior fabrication of acrylic removable retainers that can be stowed till the next appointment of debonding and inserted without any delay.

Key Words: Acrylic removable retainer, Retention, Relapse

Introduction

Relapse after orthodontic treatment is a nightmare for the orthodontist as well as the patient. So for this reason, it becomes mandatory to deliver retainers immediately after finishing the case [1]. While fixed bonded retainers can be made chair side and given instantly, not all cases will require them [2]. In such cases, the acrylic removable retainers need to be constructed in a laboratory that requires time for obtaining cast, fabrication of wire components and acrylization. But all this while patient is left with no appliance in the mouth to retain the corrected tooth positions. So, the present article eliminates this no appliance-no retainer phase as the casts are already obtained in the previous appointment and retainer is made ready by the next appointment.

Procedure

Clinical setting

After completion of finishing and detailing i.e., when the case is almost ready to debond, firstly remove the archwire from the bracket slots and followed by molar bands/molar tubes. In case it is a non-extraction case, debond the second premolar brackets (but not mandatory). Clean the residual cement adhered to the molars and second premolars (if it is debonded). Now, make alginate impression of the arch to be deboned to obtain the cast. Put back the archwire in bracket slots, cut the distal extension of the wire close to the first or second premolar region and cinch gingivally to prevent pocking of the wire. Consolidate the archwire with ligature wire to prevent opening of spaces. This will ensure that no changes will occur until the appliance is inserted in the next appointment. The patient is recalled whenever the appliance fabrication is completed (*Figure 1*).

Laboratory setting

Once the cast is obtained, trim the brackets completely on the cast with no. 15 Bard-Parker scalpel blade and contour the tooth using Lacron's carver. Now fabricate the appropriate removable retainer as done routinely. In this case, Hawley's appliance is made by bending Adam's clasp on 1st molars and a retention short labial bow on anterior teeth with 0.7 mm round hard stainless wire. Acrylize the wire components using cold cure acrylic, trimming and polishing of the plate is made (*Figure 2*). Check for the fit of the appliance on the cast.

Clinical setting-on the day of debonding

Remove the consolidation and debond all the brackets along with the archwire. Polish the tooth surfaces to remove remnant composite adhesive. Insert the appliance and check for its fit (*Figure 3*).

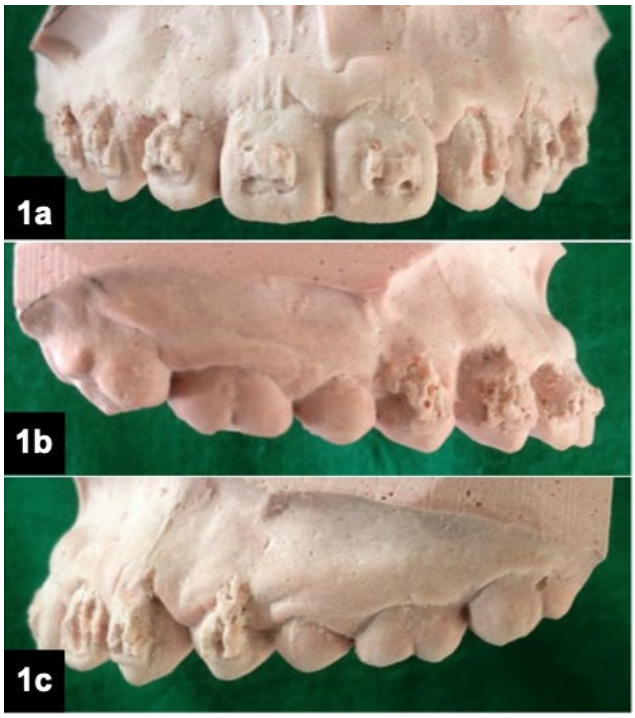

Figure 1. *Cast obtained with brackets replica intact.*

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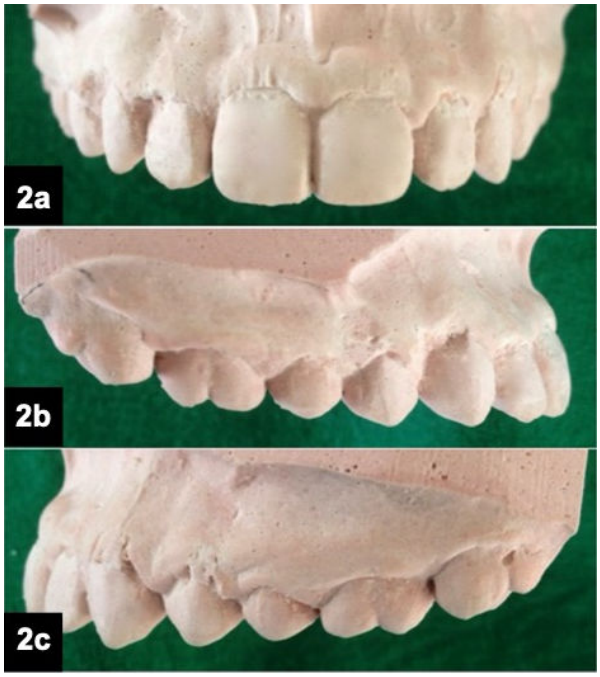

Figure 2. *Brackets trimmed on the cast and tooth contoured using Lacron.*

Figure 3*. Acrylic removable retainer intact.*

Conclusion

This technique helps in instant delivery of removable acrylic retainer on the debonding visit, there by eliminates the risk of relapse after orthodontic treatment.

Conflict of Interests

The authors declare that they have no conflict of interests.

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