

Clinical Pearl

Tempo blocks

ABSTRACT

Bite opening is often required to achieve clearance for correction of certain malocclusions such as crossbites or deep overbites. The present article introduces “tempo blocks” which are easy to fabricate and use and can be used along with the fixed orthodontic appliance in place.

Keywords: Crossbites, deep overbites, tempo blocks

INTRODUCTION

Orthodontists often need to open the bite in the beginning stages of treatment to avoid traumatic occlusion caused by bracket interferences, crossbites, or other impediments to tooth movement. Many devices have been utilized for this purpose, including anterior or posterior bite splints, bonded lingual biteplanes or Bite Turbos, and bonded occlusal composite resin build-ups.^{1-4]}

Steps in fabrication

- To fabricate the “tempo blocks” first take a squash bite and mount the casts on a hinge articulator [Figure 1]
- Open the bite to achieve sufficient clearance (for correcting crossbite or bonding lower arch)
- Take a 0.032” stainless steel wire to make two “Z” shaped wire forms which fits in the lingual sheath on one side and embeds in the acrylic blocks on other [Figure 2]
- The acrylic blocks can be fabricated by mounting the models on a hinge articulator and opening the bite to the needed amount [Figure 3].

CASE REPORT

Case 1

A 13-year-old female patient reported with a bilateral canine crossbite in. Bite opening was needed to correct the crossbite [Figure 4a]. Tempo blocks were given for the same [Figure 4b].



Figure 1: Casts mounted on hinge articulator for fabrication of "tempo blocks"

Case 2

A 19-year-old male patient came with a 100% deep bite malocclusion [Figure 5a]. The bonding of the lower arch in such cases is delayed by 2–4 months for achieving some

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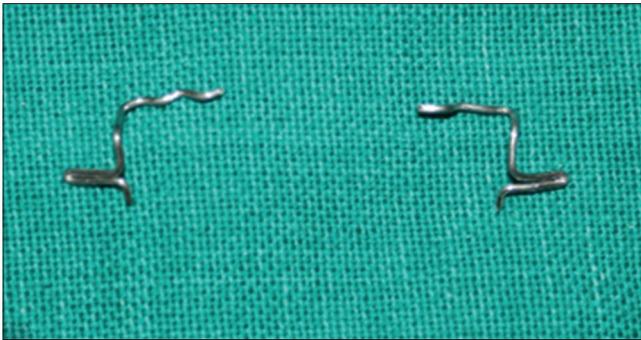


Figure 2: Z-shaped wire components for "tempo blocks"



Figure 3: "Tempo blocks"

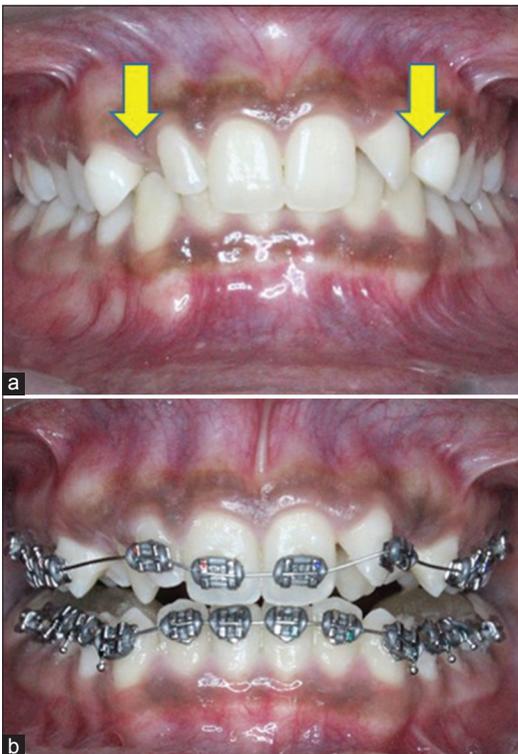


Figure 4: (a and b) "Tempo blocks" for opening bite in case of bilateral canine crossbite

overjet. However, bite opening can be done to bond the lower teeth from the beginning to reduce the treatment duration. Tempo blocks were placed, and bite was opened [Figure 5b].

Advantages

The tempo blocks have several advantages over the existing bite raising techniques:

- The "tempo blocks" can be used for bite opening when:
 - Correcting crossbite
 - Bonding the lower arch in the beginning in deep bite cases
 - Can be used in growing patients for correction of an open bite by molar intrusion.



Figure 5: (a and b) "Tempo blocks" for opening bite in case of 100% deep bite malocclusion

- Can be easily fabricated and repaired
- Can be placed or removed easily and quickly without patient discomfort or the need for special instruments
- The amount of bite opening can be adjusted and modified any time in between the treatment
- Does not interfere with the treatment as the appliance is placed by inserting into the lingual sheath.

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Conflicts of interest

There are no conflicts of interest.

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