

## Rubberized posterior bite block: An effective fixed temporary bite opening tool adhering to COVID-19 protocols

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### Abstract

Treatment of mild to moderate deep bites have always been associated with use of GIC bite blocks posteriorly on the molars to temporarily open the bite. The drawbacks of posterior GIC bite blocks, such as inability to standardize the height of the bite block, aerosol contamination and enamel demineralization of tooth surface on its removal, has made the use of GIC bite blocks an absolute contraindication during this Covid-19 pandemic. To overcome this, we devised an innovation, using simple chair side tools such as the ligature wire reinforced with rubber sleeves to temporarily open the bite until the desired correction is achieved.

**Keywords:** Deep bite, Rubberized bite blocks, Rubber sleeves, COVID-19.

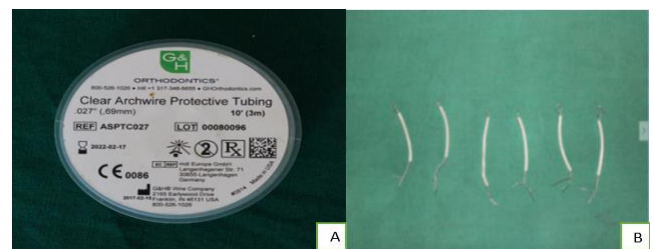
### Introduction

Conventionally for the treatment of cases with mild to moderate deep bite posterior Glass Ionomer Cement (GIC) bite blocks were used to open the bite temporarily. But along with it came its demerits such as: 1) Wearing off of the cement with regular masticatory forces; 2) Arbitrary placement of cement, if extended height might lead to molar intrusion as no standard height or level of placement of cement is known; 3) Compromises on patient comfort and to top the list; 4) High possibility of enamel demineralization while it removal.<sup>1-3</sup>

Amidst this COVID-19 pandemic, the usage of GIC bite blocks became an absolute contraindication as clinicians were highly exposed to saliva/ blood and aerosol contamination while using high speed air-rotor handpieces for the removal of these GIC bite blocks. To overcome these drawbacks, an effective alternative became a prerequisite. So, we came up with an innovation using simple chairside tools such as the Ligature Wire reinforced with Rubber Sleeves tied from molar tube to lingual sheath of the same molar band, crossing over the occlusal surface of the molar, creating a *Fixed Rubberized Bite Block* which is simple, convenient and an economically favorable method to open the bite temporarily while treating mild to moderate deep bite cases.

### Procedure

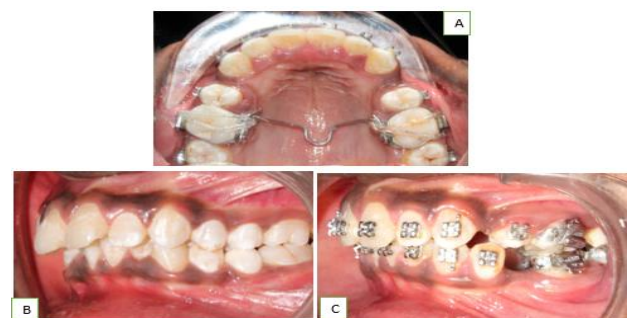
The molars are banded with a molar tube welded on its buccal surface and a lingual sheath onto its lingual surface, and these bands are then cemented onto the tooth. Ligature wire and rubber sleeves of the appropriate length are cut according to the bucco-lingual width of the molars. The ligature wires are reinforced with the rubber sleeves [Figure 1(a), (b)]



**Figure 1 (a):** clear archwire protective tube; **(b)** ligature wire reinforce with rubber sleeves

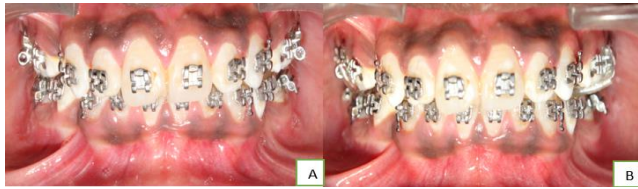
Depending on the mesio-distal width of the molar, the number of such ligature wires reinforced with rubber sleeves (2-3) are chosen.

The ligature wire reinforced with the rubber sleeve is then tied from the molar tube passing over the occlusal surface of the molar to the lingual sheath using an artery forceps, creating a fixed temporary *Rubberized Posterior Bite Block*. [Figure 2 (a), (b), (c)]



**Figure 2(a):** Occlusal photograph showing molar reinforced with fixed rubberized posterior bite block **(b):** Pre-Treatment intraoral photograph showing mild-moderate deep bite; **(c):** Upper molar reinforced with fixed rubberized posterior bite block, temporarily opening the bite facilitating simultaneous bonding of upper and lower arch

Final result of bite opening with rubberized bite block [Figure 3(a), (b)]



**Figure 3(a):** Without rubberized posterior bite block, **(b):** With rubberized posterior bite block

### Advantages

1. No aerosol contamination: highly safe guarding dentist from occupational hazard during COVID-19 pandemic.
2. No damage to tooth surface.
3. Easy and simple method
4. Less time consuming
5. Can be easily fabricated using chair side tools
6. No need for patient compliance as it is a fixed bite block
7. Standardized method than arbitrary placement of cement
8. Economically favorable
9. Efficient method for temporary bite opening
10. Patient comfort enhanced due to better masticatory adaptability.

### Conclusion

This clinical innovation is a simple, effective and standardized fixed method to open the bite temporarily while treating mild to moderate deep bite cases, eliminating

the possibility to damage to tooth surface, reducing chairside working time by facilitating easy removal and safeguarding the health of the clinician and the working staff by adhering to COVID-19 treatment protocols.

### Declaration of conflicting interest

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### Conflict of Interest

None.

### References

1. Sehgal V, Chandna A, Saini M. Use of semifixed posterior bite blocks to open a deep bite. *J Clin Orthod* 2008;42(6):358-60
2. Kiyak HA. Patients' and parents' expectations from early treatment. *Am J Orthod Dentofac Orthop* 2006;129(4):Suppl: S50-4.
3. Ahmad N, Ansari A, Gera A, Kaur G. Clinical innovation: A new method to retain the posterior bite blocks for anterior crossbite correction. *J Indian Orthod Soc.* 2014;48:139-40.

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