

How to Cite:

Husain, S., & Subramanian, A. K. (2022). Customised bondable Jig for mini implant placement. *International Journal of Health Sciences*, 6(S6), 3994–3996.
<https://doi.org/10.53730/ijhs.v6nS6.11560>

Customised bondable Jig for mini implant placement

Seerab Husain, BDS

Postgraduate Student, Department of Orthodontics and Dentofacial Orthopedics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India

*Corresponding author email: serab7421@gmail.com

Aravind Kumar Subramanian, MDS

Dean, Professor and Head of the Department, Department of Orthodontics and Dentofacial Orthopedics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India

Email: aravindkumar@saveetha.com

Abstract--Temporary anchorage devices (TADs) or Mini-implants play a key role in preserving anchorage during orthodontic treatment, in order to bring about desired tooth movements. The process involved in TADs placement however, carries the risk of root perforation, damage to sinus lining and placement of implant in areas devoid of adequate bone. To overcome these challenges, implant placement jigs are used as guides to aid in accurate placement of TADs. This clinical pearl aims at developing an easy, in-office method of fabricating a custom jig for TADs placement, which can be made chair-side, using armamentarium that is routinely found in every dental clinical set up.

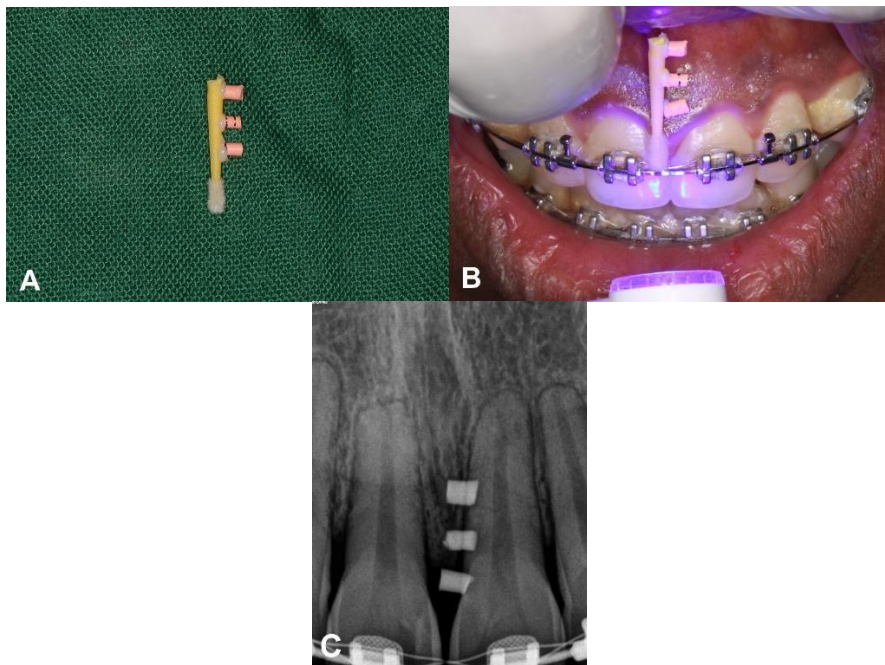
Keywords--anchorage, mini implants, placement guide, TAD.

Introduction

Mini-implants placement requires radiographic assistance and certain aids to avoid root perforation, placement in areas devoid of adequate bone and penetration of sinus lining in the posterior region between the premolars and molars. To overcome these obstacles, implant placing jigs are commonly used, to radiographically localise the height of mini-implant placement. Most of the jigs described in literature are either technique sensitive or too cumbersome to fabricate.^[1,3] This article introduces a simple method of using gutta percha point (GP points) and applicator tip to fabricate a customised bondable jig for mini-implant placement in all the regions of maxilla and mandible.

Procedure

- The bendable segment of an applicator tip is cut along with the bristles.
- GP points are cut into 3 small 1mm pieces.
- The GP points are bonded to the cut segment of the applicator tip using flowable composite at 2mm intervals between each point. (A)
- Bonding agent is applied to the bristles of the applicator tip.
- The tip is placed on the archwire adjacent to the area of implant placement and the bonding agent is light-cured. (B)
- An intraoral periapical radiograph is taken with the jig in place to reveal only the position of the GP points. (C)
- A bleeding point is elicited on the appropriate height and the jig is broken off the archwire.
- The mini-implant is placed at the point corresponding to the bleeding point placed earlier.



Advantages

- Can be fabricated chair-side without any need for complex manoeuvre.
- Can be used in both arches between any teeth.
- Can be used to determine the height of placement of micro-osteoperforations.
- Is completely radiolucent, except for the GP points which are radiopaque and will alleviate object superimposition.

References

1. Pattabiraman V, Kumari S, Sood R. Mini-implant-supported sliding jig. *Orthodontics (Chic.)*. 2011 Winter;12(4):396-9.
2. Sharma K, Sangwan A. K.s. Micro-implant placement guide. *Ann Med Health Sci Res*. 2014;4(Suppl 3):S326-S328.
3. Choi HJ, Kim TW, Kim HW. A precise wire guide for positioning interradicular miniscrews. *J Clin Orthod*. 2007 May;41(5):258-61.
4. Widana, I.K., Sumetri, N.W., Sutapa, I.K., Suryasa, W. (2021). Anthropometric measures for better cardiovascular and musculoskeletal health. *Computer Applications in Engineering Education*, 29(3), 550–561. <https://doi.org/10.1002/cae.22202>
5. Aprianto, D. R., Parenrengi, M. A., Utomo, B., Fauzi, A. A., & Subagyo, E. A. (2022). Autograft and implant cranioplasty in pediatric patients. *International Journal of Health & Medical Sciences*, 5(1), 129-136. <https://doi.org/10.21744/ijhms.v5n1.1852>