Content available at: https://www.ipinnovative.com/open-access-journals

IP Indian Journal of Orthodontics and Dentofacial Research

Journal homepage: https://www.ijodr.com/

Short Communication

Quick bonding with ready-to-use universal bracket positioning jigs

Rohan S Hattarki[1]*, Susmita Bala Shenoi[2], Adithi Rao[1], Pravin Mandaki[1], Karishma Patil[1]

[1]*Dept. of Orthodontics and Dentofacial Orthopaedics, KLE VK Institute of Dental Sciences KLE Academy of Higher Education & Research, Belagavi, Karnataka, India*
[2]*Private Practitioner, Bengaluru, Karnataka, India*

ARTICLE INFO

Article history:
Received 28-06-2024
Accepted 24-07-2024
Available online 02-09-2024

Number of techniques for improving bracket positioning have been described.[1–5]

In order to save considerable chairside time during bonding, this article describes a method for quick bonding with universal bracket positioning jigs.

The jigs are pre-fabricated and kept ready-to-use prior to the patient's arrival.

The jigs serve the purpose of positioning brackets on all teeth in both the vertical and axial planes simultaneously, along with reducing chairside time.

Fabrication of the bracket bonding jig:

1. Measure 5 mm on a 0.017 x0.025" SS wire. This represents arm AB, which will enter the bracket slot. (Figure 1A)
2. Make a bend a little over 90° upward from point B, and downward from point A such that the 2 bent arms are parallel to each other with arm AB slightly angulated joining them. (Figure 1)
3. 3 mm from points A and B, make a 90° inward bend such that the 2 bent arms are parallel to each other. (Figure 1A)
4. From points E and F (2.5 mm away from points D and C respectively) make a 90° bend as shown (Figure 1A)
5. Care should be taken to make sure that the arms FG and EH are coincident.
   This vertical line coincides with the base point on the bracket, and helps in orienting the bracket along the long axis of the tooth.
6. From point E, make 1 mm calibrations up to 5 mm. Arm DE kept at 3 mm implies that if it touches the incisal edge of the tooth, the bracket is placed at a height of 3 mm. Vertical height adjustments can be done according to the calibrations on arm EH. (Figure 1A)
7. Arm EH functions as the handle of the jig. It also has calibrations for vertical height adjustment.

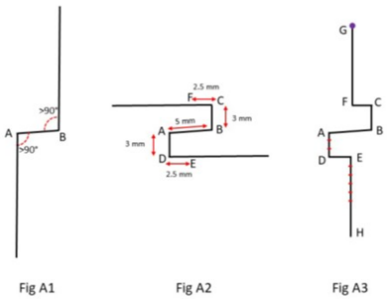

Figure 1: Fabrication of the jig

* *Corresponding author*.
E-mail address: drrohanhattarki@gmail.com (R. S. Hattarki).

https://doi.org/10.18231/j.ijodr.2024.039

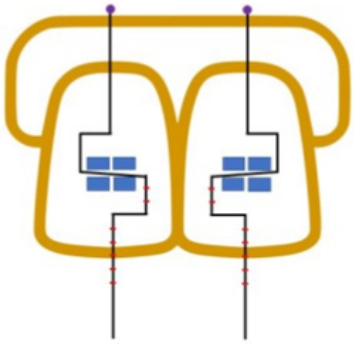

Figure 2: The jigs positioned at 6 mm on the right and left maxillary central incisors

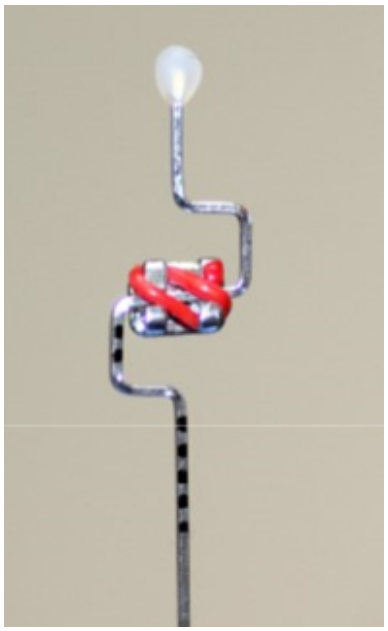

Figure 3: Fabricated jig secured onto a bracket with an elastic module, along with a composite bead shown

This forms a universal bracket positioning jig for the left side. The same jig held in a horizontally flipped manner with arm AB having a mesial tip in concordance with the bracket tip becomes a jig for the right side.

Figure 2 shows the jigs positioned at 6 mm on the right and left maxillary central incisors.

Many such jigs can be made and secured with elastomeric modules on diagonal wings of all the brackets. A composite bead can be added on the top of the jig in order to prevent soft tissue impingement. (Figure 3)

These can then be assembled quadrant wise on a cork or wax block as shown. (Figure 4) The brackets, loaded with adhesive can then be stored in a dark and dry place, ready-to-use on patient arrival for bonding.

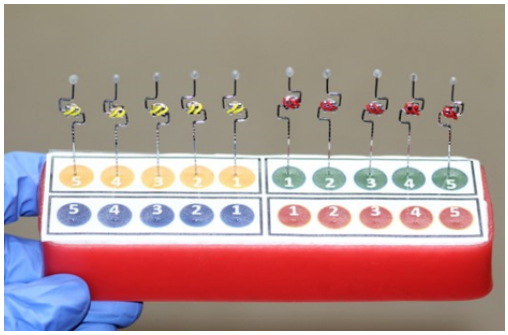

Figure 4: Jigs assembled with brackets quadrant wise on a cork or wax block

Figure 5: Brackets positioned on the teeth along with the jigs for accurate placement

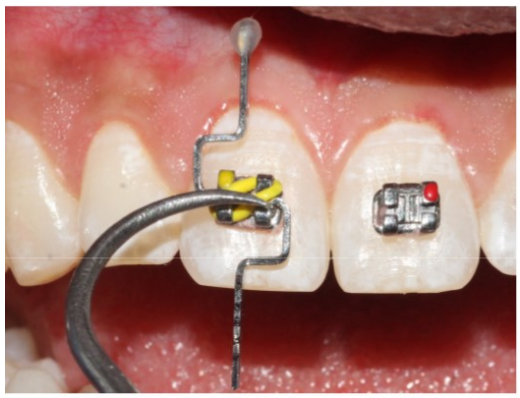

Figure 6: The bracket can be seated onto the tooth with a curved probe

During the bonding procedure, after conventional etching and priming of the teeth is done, the jigs along with secured brackets are each positioned on the teeth and cured in place. (Figure 5) Before curing, the bracket can be pressed onto the tooth with a curved probe or sickle scaler, that is also used to remove the flash around the bracket once seated completely. (Figure 6) The elastomeric modules can then be removed to release the jig, which can be autoclaved and reused.

Advantages

1. Makes the bonding procedure much faster and easier as the ready-to-use jigs save time, positioning the brackets.
2. Each jig plays the universal role of a handle, bracket positioner in all planes, thus saving time during bonding.
3. Jigs can be reused, thus one or more sets can be fabricated and kept handy.

Conflict of Interest

None.

References

1. Carlson SK, Johnson E. Bracket positioning and resets: Five steps to align crowns and roots consistently. *Am J Orthod*. 2001;119(1):76–80.
2. Samuels RH. A new bracket-positioning instrument. *J Clin Orthod*. 2000;34(8):482–3.
3. Droschl H, Bantleon HP. Bracket positioning gauge. *J Clin Orthod*. 1986;20(4):266–8.
4. Smaha CN, Voth ED. A positioning device for direct bracket attachment. *Am J Orthod*. 1972;62(4):394–9.
5. Hattarki RS, Malag S. A modified bracket-positioning gauge. *Orthodontics (Chic)*. 2011;12(3):268–9.

Author biography

Rohan S Hattarki, Professor & Head https://orcid.org/0000-0002-2811-1947

Susmita Bala Shenoi, Private Practitioner https://orcid.org/0000-0003-3895-1963

Adithi Rao, Lecturer https://orcid.org/0000-0002-5934-8939

Pravin Mandaki, Lecturer https://orcid.org/0000-0002-4392-5738

Karishma Patil, Lecturer https://orcid.org/0009-0004-2467-1842

Cite this article: Hattarki RS, Shenoi SB, Rao A, Mandaki P, Patil K. Quick bonding with ready-to-use universal bracket positioning jigs. *IP Indian J Orthod Dentofacial Res* 2024;10(3):222-224.