ABSTRACT

Sliding mechanics are routinely used in our day to day orthodontic practice and use of power arm in various forms is integral to it. Here is an innovative method to fabricate a power arm which can be easily fabricated at the chair side.

Keywords: Archwire, Power arm.

INTRODUCTION

For years, orthodontists have searched for an efficient force system that can work quickly, accurately and effectively to shorten treatment time. A sliding mechanics force system might be an answer, if we know how to control and manipulate the force system well. From the Andrews straight wire appliance1,2 to the McLaughlin, Bennett, Trevesi appliance,3 sliding mechanics force systems have been widely used, mainly for anterior tooth retraction during space closure in orthodontic treatment.

The use of power arms attached to the archwire enables one to readily achieve controlled movement of the anterior teeth. The force system for the desired type of tooth movement, such as bodily movement can be easily carried out by attaching various heights of power arm to the archwire in sliding mechanics.4 In sliding mechanics the power arm is placed mesial to the canine which enables better control of the anterior teeth.

Simple technique for fabricating a hook has been devised which can be made at the time of archwire fabrication.

PROCEDURES

1. Take a 0.019” × 0.025” stainless steel straight length wire and mark where the hook has to be fixed.
2. Bend the wire 90° at the point marked and then give another bend inward (Fig. 1).
3. Give another bend at 2 mm from the last bend and make a ‘J’ shaped hook (Fig. 2).
4. Using the spot weld machine, weld the two parallel arms of the ‘J’ hook (Fig. 3).
5. Turn the wire again at 90° so, that the wire is in the same plane as was before bending the hook.
6. Make the hook of the other side and make the desired arch form (Fig. 4).
7. The wire with hook in patient’s mouth (Fig. 5).

Fig. 1: Bend the wire 90° at the marked point and then give another bend inwards

Fig. 2: Give another bend at 2 mm from the last bend and make a J-shaped hook
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Fig. 3: The spot welding machine welds the two parallel arms of the ‘J’ hook

Fig. 4: Similarly make the hook of the other side

Fig. 5: Fabricated archwire with power arm in situ

CONCLUSION

We have found this to be a more economical variant, as compared to the crimping of prefabricated crimpable hooks which require specific crimping pliers and have the potential to become loose during the treatment. Another advantage of fabricating a hook is that its length can be made as desired.

REFERENCES