Easy Ligature Hooks on Archwire

Sanjeeb Kumar Sahu, Snigdha Pattanaik, Smruti Bhusan Nanda

ABSTRACT

Any where hooks are meant for application of force delivery system. Soldered hooks were replaced with crimpable archwire hooks in everyday clinical practice. However, simple and cost-effective method should be available with the clinician, alternate to crimpable hooks. This article describes stepwise fabrication and application of simple ligature hooks to the archwire.

Keywords: Hooks, Ligature hooks, Crimpable hooks.

How to cite this article: Sahu SK, Pattanaik S, Nanda SB. Easy Ligature Hooks on Archwire. J Ind Orthod Soc 2014;48(4):431-432.

Source of support: Nil

Conflict of interest: None

INTRODUCTION

Hooks on the archwire can be directly attached for application of force delivery systems by using either elastomeric materials or nickel-titanium closed coil spring. Hooks can be soldered, but it is time-consuming and may lead to annealing of the archwire. Preposted archwires may be alternate choice, which requires large inventory stock and has cost implication. Next choice is crimpable archwire hooks which has few disadvantages like it may cause galbion on the wire resulting in unwanted force into the wire. Yadav and Ashok suggested ligature hooks and sturdy hooks, but they can only be used with the brackets not on the archwire. This article describes the fabrication and application of simple ligature hooks to the archwire for attachment of force delivery system.

FABRICATION

Using an explorer, bend a length of dead-soft 0.014" ligature into a loop. Ligature wires as thin as 0.009" can be used but to increase the stiffness of the hook without changing the diameter of the wire, twist the legs of the ligature wire around each other, using an artery forceps. This will double the diameter of the hook and will be stiff enough (Fig. 1).

After locating the desired position in the rectangular archwire (the arch wire can be sandblasted at that point for additional retention), twist the legs of the ligature wire around the archwire each other using artery forceps tightly (Fig. 2) in or out of the mouth.

Now dry with moisture free air and apply flowable composite (Fig. 3) around the junction of ligature and the archwire, and light cure it properly (Fig. 4).
Cut the excess of ligature wire and smooth it with a flat fissure diamond bur (Fig. 5). Now, your hook is ready (Fig. 6) to use for any purpose.

This ligature hooks are very economical and extremely useful for practitioners; which can be easily fabricated by chair side and can be used alternate to crimpable hooks when not available. These can be easily removed by crushing it with Hoe pliers without deforming the main archwire.

REFERENCES