

Clinical Pearl

Reactivation of NiTi open coil spring using crimpable hook: A clinical pearl

ABSTRACT

Ni-Ti open coil springs are often used to create space for alignment of malposed teeth. Predetermining the length of open coil spring required to open up the exact amount of space is rather difficult, and occasionally, the length of the open coil spring falls short to open up the entire space required. This article highlights the chairside intraoral method of reactivation of NiTi open coil spring with the use of crimpable hook without removing the base archwire.

Keywords: Crimpable hook, open coil spring, space regaining

INTRODUCTION

Predetermining the length of open coil spring required to open up the exact amount of space is rather difficult, and occasionally, the length of the open coil spring falls short to open up the entire space required.^[1] Such a situation necessitates removal of the base arch wire and replacement with a longer spring which is often cumbersome and time-consuming, especially in a cinched stainless steel wire. Several methods advised for reactivation of the open coil spring have been given in literature such as split stainless steel tubing,^[2] addition of 1.5–2 mm extra length of open coil spring,^[3] spreading the coils apart by squeezing the adjacent helix with pliers,^[3] C-rings fabricated from stainless steel rectangular arch wires,^[4] and composite stop.^[5] Here, we present a very simple yet effective and quick chairside method to reactivate the open coil spring using crimpable hooks without arch wire removal.

TECHNIQUE

Hold the crimpable hook as shown in Figure 1a with a crimpable plier. Expose the base arch wire by pushing the open coil spring to one side with a ligature tucker. Place the crimpable hook over the base archwire and crimp it to

secure it on the wire [Figure 1b]. Release the coil spring so that it contacts the end of crimpable hook and the coil spring gets reactivated [Figure 1c] without base archwire removal. With the use of crimpable hook to reactivate NiTi open coil spring, approximately, 3 mm of space can be regained per single crimpable hook, and it can be further reactivated by addition of one more crimpable hook.

DISCUSSION

Previous methods proposed for reactivation of open coil spring necessitates arch wire removal which is, especially cumbersome in case the arch wire is cinched back or any individual first/second order bends have been given in it. The removal may lead to bracket debonding at a critical stage.

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How to cite this article: Sewda SK, Waingankar AM, Sharma M, Prasanna Kumar MP, Jain A. Reactivation of NiTi open coil spring using crimpable hook: A clinical pearl. *Int J Orthod Rehabil* 2017;8:159-60.

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Website: www.orthodrehab.org	Quick Response Code 
DOI: 10.4103/ijor.ijor_25_17	

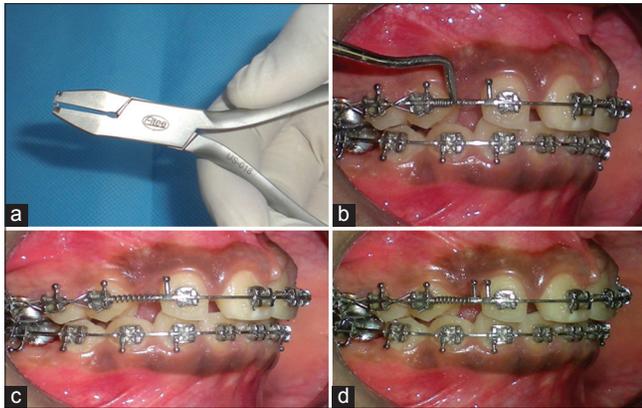


Figure 1: Step by step clinical procedure

In addition to this, split tubings^[2] lead to accumulation of plaque and food debris thereby leading to a compromised oral hygiene. “C” Rings^[4] have the disadvantage of rolling over onto the arch wire and its fabrication also consumes chair side time. Composites may fracture and they either roll and travel along the wire or simply break down. Our technique to reactivate NiTi

open coil spring is simple, easy, and time-saving. One or more crimpable hooks can be crimped onto the wire [Figure 1d], as required as per the range of reactivation desired.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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