

An Efficient Method of Open Coil Spring Insertion

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ABSTRACT

Open coil springs are often used in the orthodontic practice to open spaces to accommodate certain teeth. Insertion of open coil springs can be tricky and may require assistance. An easy and efficient method of open coil spring insertion is presented which can be routinely used and requires no additional armamentarium.

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INTRODUCTION

The open coil spring is a wound spring which is activated by compression and exerts a net 'pushing' force in two directions away from its center.¹ Open coil springs are mainly used for opening spaces to crowding or for the distalization of the molars.²

Inserting an open coil spring is a cumbersome procedure. The coil spring needs to be compressed between the two teeth and often requires assistance to hold one of its ends with a wire tucker to firmly ligate the adjacent teeth. Failure to ligate the teeth properly can lead to rotation of the teeth.

An easy and efficient way of insertion of open coil spring using elastomeric ligature is presented. This technique helps in avoiding the use of wire tucker or assistance in any form without compromising the quality of ligation.

METHODS

Steps during ligation are as follows:

1. Insert coil spring of adequate length in the archwire and tie ligature wire on bracket of tooth on one side of coil spring (Fig. 1).
2. Engage an elastomeric ligature into the other end of the coil spring (Fig. 2).
3. Stretch the elastomeric ligature toward the adjacent tooth with Mathieu's needle holder or a Howe pliers (Fig. 3).



Fig. 1: Coil spring inserted into the archwire and tooth on one side of coil spring tied with ligature wire



Fig. 2: An elastomeric ligature engaged into the other end of the coil spring



Fig. 3: The elastomeric ligature stretched toward adjacent tooth

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Fig. 4: Elastomeric ligature engaged into the wings of the bracket of adjacent tooth



Fig. 6: Elastomeric ligature cut to remove it



Fig. 5: Tooth engaged with ligature wire



Fig. 7: Fully ligated bracket

4. Engage the elastomeric ligature into the wings of the bracket of adjacent tooth (Fig. 4). The open end of coil spring will thus be pulled away from the unligated bracket and will create sufficient space for ligation with ligature wire.
5. Ligate the tooth with a ligature wire (Fig. 5).
6. The elastomeric ligature can be cut (Fig. 6) or removed.

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