

# A custom made jig for individual canine retraction

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## Abstract

We face difficulty in individual canine retraction in the bracket system lacking power arms on the canines. When orthodontic force is applied through the center of resistance (CR), then, tooth translation ensues. Forces applied at a distance from the CR create a moment that tends to rotate and tip the tooth. The tendency of tipping is increased in the bracket system lacking power arm, since, force is applied more occlusally. Hence, we have designed a chair side custom made jig to retract the canines individually.

**Key words:** Brackets, center of resistance, translation

## INTRODUCTION

We face difficulty in individual canine retraction in the bracket system lacking power arms on the canines. Hence, we have designed a chair side custom made jig to retract the canines individually. It is simple, efficient, and cost effective.

## FABRICATION

Twenty-one gauge wire is soldered on 16 gauge needle perpendicularly. After that, the needle is cut from both sides around the wire with the help of rotating disk. Hook is made by bending the wire in the plane of the needle. The height of hook is considered according to biomechanical requirements [Figures 1 and 2]. To deliver slow and continuous force, a small piece of open coil spring can be compressed between the canine bracket and jig [Figure 2].

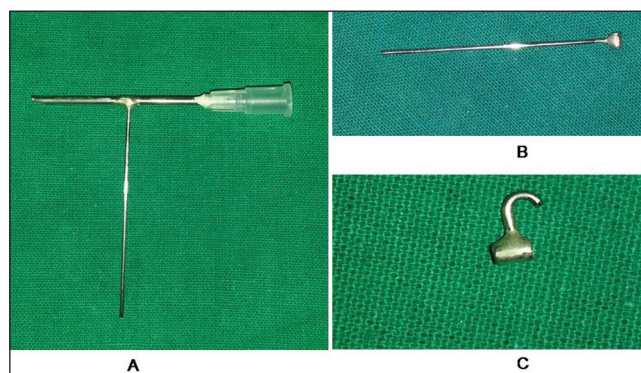


Figure 1: (A-C) Fabrication of jig

## DISCUSSION

The center of resistance (CR) in a canine may be located at 45% of its root length.<sup>[1]</sup> When, orthodontic force is applied through CR, then, tooth translation ensues. Forces applied at a distance from the CR create a moment that tends to rotate and tip the tooth.<sup>[2]</sup> The tendency of tipping is increased in the bracket system lacking power arm, since, force is applied more occlusally. Thus, the purpose of this custom made jig is to shift the point of force application

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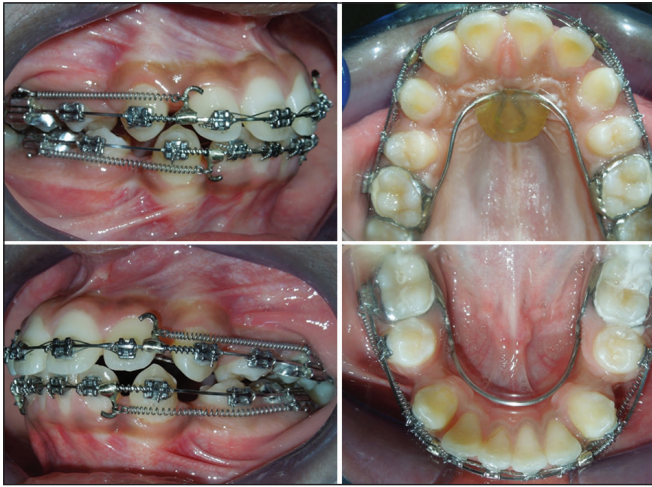
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**Figure 2:** Intraoral view of installed jig

more apically. This type of jig can be made and readjusted quickly at chair side with minimum effort.

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#### **Conflicts of interest**

There are no conflicts of interest.

#### **REFERENCES**

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