

An alleyway

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Abstract

Use of microimplants in orthodontics has been increasing many folds in recent times. One of the most important aspect of microimplants stability is the position and angulations of placement. This article describes an implant placement guide that is simpler to fabricate, economical, least time consuming and a more practical for use in day-to-day orthodontic practice.

Key words: Microimplants, placement guide, stability

INTRODUCTION

The concept of temporary anchorage devices is a relatively new application of more established clinical methodologies. Although the clinician can look to the literature for many answers, much is unknown and will only be answered by well-designed prospective basic science and clinical trials.^[1] Orthodontic mini implants require a less complex surgical procedure. Still, if the quantity of interproximal bone and the inclination and proximity of the roots are incorrectly evaluated, there is a risk of root perforation.^[2-4] Some authors propose surgical guides determining the implant position and inclination by means of a metallic wire connected to the orthodontic fixed appliance or a removable acrylic plate.^[5,6] Another critical factor in orthodontic mini implant placement is the angle of insertion. Recommended angles of the implant to the long axes of the teeth have ranged from 10° to 20° in the mandible and from 30° to 40° in the maxilla.^[7] The position and ideal orientation of the TAD relative to the surface of the bone and/or to the root surface is very important from the implant stability point of view.^[8]

Fabrication

This article is about a surgical guide for mini implants that can be made from the materials available in the orthodontic office with utmost ease.

Step 1

21 × 25 SS, 16 × 22 SS welded with a spot welder (for 022 slot) [Figure 1].

17 × 25 SS, 16 × 22 SS welded with a spot welder (for 018 slot).

Welding is done with wires crossing each other at 90°.

Step 2

Another straight 0.7 mm round SS wire is bent at 90°. This wire is tied to the 16 × 22 SS wire with the help of two ligature wires [Figure 2].

Step 3

This SS wire of 0.7 mm can be fixed at any particular angulations using protactor [Figure 3].

Step 4

This wire is fixed to the bracket slot with the help of an elastic module [Figure 4].

Step 5

This device is going to guide the microimplants placement position and direction during the procedure proper as the 0.7 mm SS wire can be moved horizontally, vertically as well as the angulations is adjustable [Figure 5].

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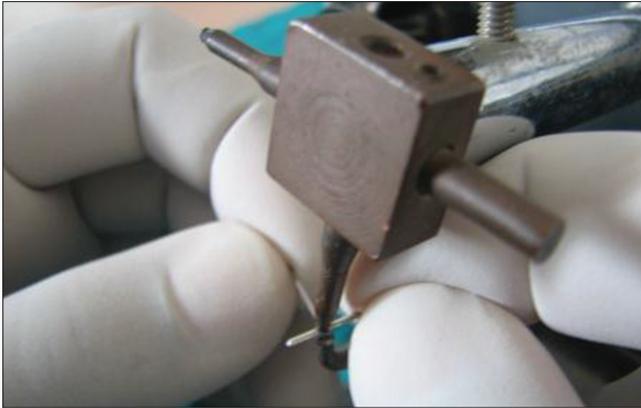


Figure 1: Step 1



Figure 2: Step 2

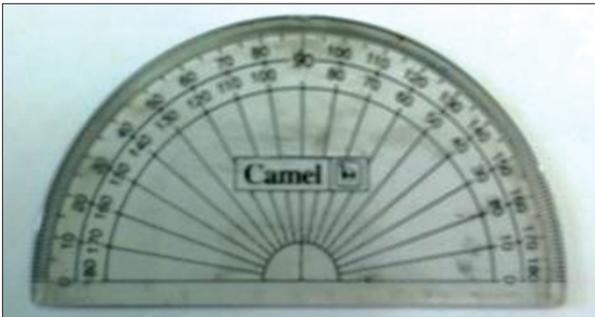


Figure 3: Step 3



Figure 4: Step 4



Figure 5: Step 5



Figure 6: Implant placed using the same guide



Figure 7: IOPA radiograph of the area shown in figure-6

Figures 6 and 7 shows implants placed using the same guide and the IOPA radiograph of the same area with the implant, respectively.

CONCLUSION

This guide is autoclavable as well as can be cold sterilized as this does not have any acrylic part. A drop of synthetic glue can be added at the junction of the 16 × 22 SS and 0.7 mm SS just to make it immobile.

Advantages

- Very economical and least time consuming
- Can be sterilized
- All the armamentarium and material used is readily available in orthodontic office
- It guides the microimplant even during the placement, till the end.

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