

SAS-A Novel for Anterior Mini Implant Placement

Shruti B. Chandak^{1*}, Sujit N. Zadake¹, Anand S. Ambekar¹ and Payal B. Bhutada¹

¹Maharashtra Institute of Dental Sciences & Research, (MIDSR) Latur, India

*Corresponding Author: Dr. Shruti B. Chandak, Maharashtra Institute of Dental Sciences & Research, (MIDSR) Latur, India

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Abstract

Anchorage in orthodontics is usually achieved by using a tooth or group of teeth to bring out desired orthodontic tooth movement. In last few decades, due to increase in demand for maximum anchorage use of mini-implant has increased. This has proved to be a successful method of anchorage as it can be easily inserted, removed, it has small size and gives good patient compliance. Success and stability of micro implant depends upon site of implant. Therefore, the proper selection of site for mini-implant placement is of utmost importance. This site can be determined on clinical and radiographic bases. Many techniques have been introduced for placement of implant, but it requires more time for fabrication or expensive. The present study provides a new method for fabrication of implant grid for placement of implant in anterior region.

Keywords: Mini-implant, placement guide, Anterior region

Introduction

Advancement in orthodontic material have provided orthodontist with benefits of using mini implant as an effective device in anchorage control. Orthodontic mini implant are most commonly used fixation device by orthodontist for getting absolute anchorage and achieve intrusion in deep bite cases.

Most important factor for using mini- implant is its site selection and positioning for following reason:

- To prevent root perforation and damage to adjacent structure
- To prevent damage to vital structure
- To achieve stability of implants
- For effectiveness of implants

Several guides and grid have been made for accurate positioning of orthodontic implant in posterior region but this is the unique one fabricated using a regular orthodontic wire which is very convenient and simple. The purpose of this article is to describe the fabrication of a simple implant guide for accurate positioning of orthodontic implant in anterior region with minimal equipment.

Armamentarium (Fig 1a,1b,1c)

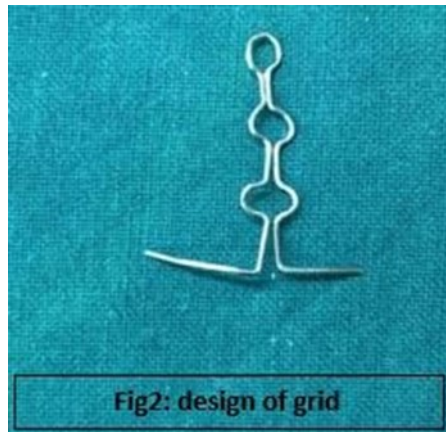
1. 23 gauge Stainless steel wire
2. Universal plier
3. E-modules



Fig: A) 23 Gauge SS Wire
B) Universal Plier
C) E- Module

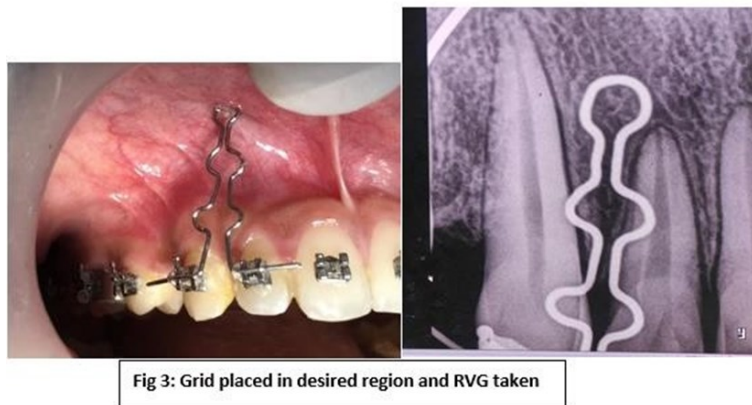
Design and steps in fabrication of implant (Fig 2)

The fabrication of wire guide was done using 23 gauge stainless steel wire. Three helices of 2mm in diameter are made at a distance of 4mm, 6mm and 8mm respectively from the bracket slot. While fabrication 0.5mm difference is kept in the base of grid for easy placement in bracket slot. As a stiffer wire is used chances of sliding of wire in bracket slot and displacement of implant guide is reduced.



Clinical procedure (fig 3a,3b)

- After fabrication of implant guide is completed, implant guide is placed in the labial vestibule And inserted into the anterior brackets and tightly secured by e-modules.
- Intraoral periapical radiograph (IOPA) or RVG was taken after securing the implantguide
- Implant placement site was determined by counting in which helix of guiding template falls in IOPA or RVG
- After achieving the accurate site bleeding spot was made by probing in that particular helix for placement of implant
- Implant was placed in desired position and intrusion was started



Advantages

1. Ease of availability of 23 gauge Stainless steel wire
2. Easy to fabricate
3. Cost effective
4. Can be autoclaved and reused
5. Comfortable to patient
6. Less chair side time required
7. Provides more accuracy
8. Less armamentarium required

Conclusion

The guiding grid with incorporated helices were used for determination of the implant site, as the size of helix in the implant grid are very small and the distance between two helix is also small which can also be used as implant site so that more accurate and precise position for implant placement can be obtained.

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