

Scissor bite correction of Maxillary 2nd Molar using Palatal Mini screw Implant

Neetu Dabla¹, Arjun Vedvyas^{2,*}, P. Narayana Prasad³, Rubina Ansari⁴, Prerna Sinha⁵

¹Professor & Head, Eklavya Dental College & Hospital, Rajasthan, ²Ex-Assistant Professor, Seema Dental College & Hospital, Uttarakhand, ³Professor & Head, Seema Dental College & Hospital, Uttarakhand, ⁴Consultant Orthodontist, Elixir Skin & Dental Clinic, Uttarakhand, ⁵Consultant Orthodontist, Aura Dental Avenue, New Delhi

***Corresponding Author:**

Email: dr.arjunvedvyas@gmail.com

Scissor Bite most commonly seen with respect to second molars.¹ Many efforts have been made to correct scissors-bite and establish proper molar inter digitation for prosthetic or orthodontic treatment.² Correction of posterior or anterior single-tooth cross bite, it involves a limited portion of the dental arch.³ The critical procedures for scissors-bite correction are intruding and palatally tipping the involved tooth when it is both extruded and buccally flared. Conventional means like use of intermaxillary elastics or intramaxillary elastics are used for correcting the scissor bites. These all methods strain anchorage, repetitive bonding failure and are patient compliant.^{2,3} But with the advent of implants and the introduction of mini screws for immediate loading has changed the clinical and biomechanical approach to the problem.

Recently, dental implants, mini plates, and screws have been used as skeletal anchorage. Skeletal anchorage provides stationary anchorage for various tooth movements without the need for active patient compliance and with no undesirable side effects. Titanium mini screws especially have gradually gained acceptance for stationary anchorage because they provide clinical advantage like minimal anatomic limitations on placement, lower medical costs, and simpler placement with less invasive surgery.⁴

Technique

The maxillary left second molar was in scissor bite with its antagonists (Fig. 1, 2). A Self tapping mini screw of 7 mm in length (Dentos) was inserted with direct method under local anesthesia. A registration point was marked within the safe zone area of the palate and the mini screw was placed with the provided screwdriver. MBT 0.022" appliance was bonded and a fixed posterior bite plane with a Trans palatal arch was placed and a

lingual button bonded with respect to maxillary left 2nd molar (Fig. 3).

A short elastomeric chain was attached from the head of palatal mini-implant to the lingual button bonded on the 2nd molar band (Fig. 4). Appointments were scheduled every 21 days and the elastomeric chain was changed for adequate force to be delivered. The correction of scissor bite was achieved within a span of three and a half months (Fig. 5, 6).

This is an efficient and effective way to correct the molar scissor bite within a relatively short span of time and without any anchorage considerations. Immediate loading and minimum tissue injury were observed.



Fig. 1: Pretreatment Photographs revealing scissor bite w.r.t. maxillary 2nd molar. A, Lateral View; B, Maxillary occlusal view

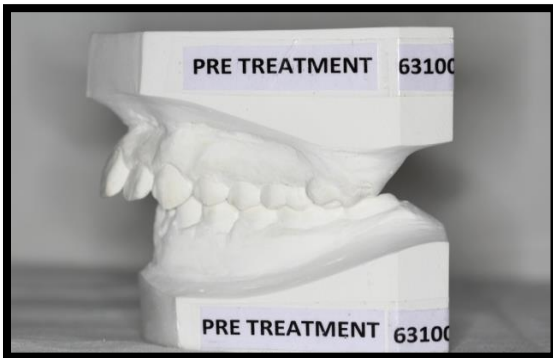


Fig. 2: Pretreatment Models. A, Maxillary occlusal; B, Lateral View

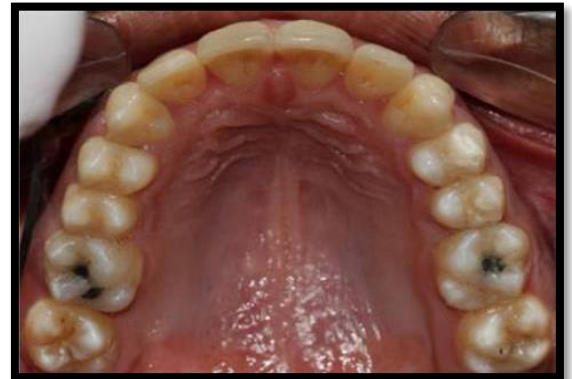


Fig. 5: After Scissor bite Correction. A. Occlusal View (Models); B. Occlusal View (Intraoral);

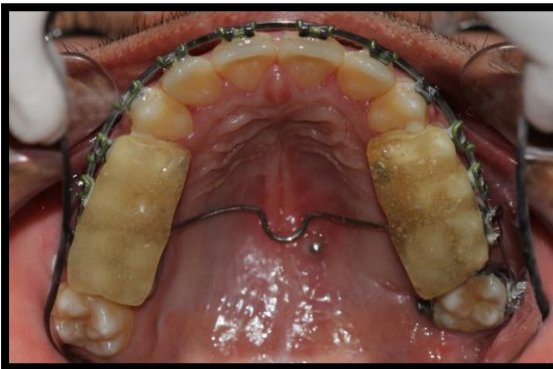


Fig. 3: Palatal micro implant positioned and lingual button bonded with posterior bite plane

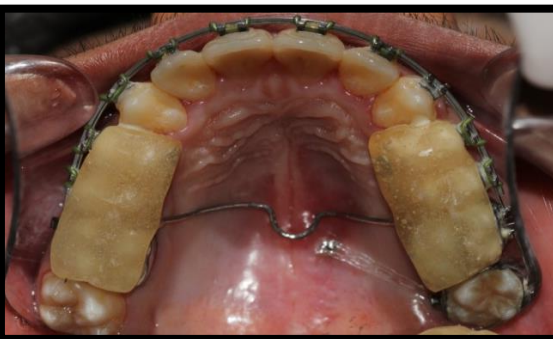


Fig. 4: E-Chain engaged from lingual button to the implant





Fig. 6: After Scissor bite Correction. A. Lateral View (Models); B. Lateral View (Intraoral)

References

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