

Unilateral scissor bite correction of second molar using modified TPA¹Dr.Maheshwari Patil, ²Dr.Rajkumar S Alle, ³Dr.Bharathi V S¹⁻³Raja Rajeswari Dental College & Hospital, Kumbalgodu, Bengaluru, Karnataka**Corresponding Author:** Dr. Maheshwari Patil, Raja Rajeswari Dental College & Hospital, Kumbalgodu, Bengaluru, Karnataka**Citation of this Article:** Dr. Maheshwari Patil, Dr. Rajkumar S Alle, Dr. Bharathi V S, “Unilateral scissor bite correction of second molar using modified TPA”, IJDSIR- March - 2021, Vol. – 4, Issue - 2, P. No. 514 – 516.**Copyright:** © 2021, Dr. Maheshwari Patil, et al. This is an open access journal and article distributed under the terms of the creative commons attribution noncommercial License. Which allows others to remix, tweak, and build upon the work non commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.**Type of Publication:** Case Report**Conflicts of Interest:** Nil**Abstract**

Scissor bite is defined as buccal displacement of maxillary posterior tooth, with or without contact between the lingual surface of the maxillary lingual cusp and the buccal surface of the mandibular antagonist. Unilateral scissor bite is known to occur in 1.5% of the population. However its treatment is challenging to clinician because of the frequent debonding.

Scissor bite if goes unnoticed may cause change in path occlusion as well. Early intervention and correction of it can prevent adverse effects on facial symmetry, jaw growth, mastication, and soft tissue injuries. In this case report correction of second molar scissor bite was done using the modified transpalatal arch design.

Key words: Scissor bite, Transpalatal arch**Introduction**

Scissor bite is reported to occur between 8% and 22%¹⁻⁴. Scissor bite may arise because of excessive maxillary width and a narrow mandibular alveolar process.

Treatment modalities to correct scissor bite includes use of intermaxillary cross-elastics, multibracket appliance

(TPA)^{5,6} with intra-maxillary elastics, grinding, Quad-helix, expansion plates, or rapid maxillary expansion, miniimplant assisted expansion, and Lingual arch appliance with intra-maxillary elastics thus to prevent development of permanent transverse malocclusion.

Diagnosis

A female patient of age 18 years reported to the department of orthodontics and dentofacial orthopaedics, Rajarajeswari dental college and hospital, Bangalore with chief complaint of irregularly placed upper and lower teeth. She had a convex facial profile with incompetent lips and moderate crowding on both the maxillary and mandibular anterior teeth. She also had a severe scissor-bite on the left maxillary and mandibular second molar with a Class I molar relationship. She had no significant deviation of the transverse skeletal pattern, who was diagnosed with Angles Class I malocclusion on a Class II skeletal base due to prognathic maxilla, proclined upper & lower incisors with scissor bite with 27 and 37.

The objectives of treatment were to relieve crowding and lip competency and to correct the left posterior scissors-bite; these corrections could provide both a balanced profile and occlusal interdigitation.

Pretreatment pictures



Figure 1

Design of the appliance

A 0.022 x 0.028 MBT brackets were used. All first molars were banded and full appliance was bonded in upper and lower arches. The scissors bite correction was done on 0.019x0.025 SS wire. A modified trans palatal arch was used in which transpalatal arch was constructed using 22 mil gauze wire.



Figure 2

Discussion

Scissor bite is a condition in which one tooth or teeth are abnormally positioned buccally or lingually with reference

to the opposing tooth or teeth. Scissors-bite applies to total maxillary buccal (or mandibular lingual) crossbite, with the mandibular dentition completely contained in the maxillary dentition in habitual occlusion. complete buccal crossbite, known as **Brodie bite**, is caused by a combination of excessive maxillary width and a narrow mandibular alveolar process.

Treating scissor bite includes such as intermaxillary cross-elastics, multibracket appliance (TPA)^{5,6} with intra-maxillary elastics, grinding, Quad-helix, expansion plates, or rapid maxillary expansion, miniimplant assisted expansion, and Lingual arch appliance with intra-maxillary elastics thus to prevent development of permanent transverse malocclusion. Expansion is definitely advantageous young patients .

In this case 0.022 x 0.028 MBT brackets were bonded and after completion of the initial leveling and aligning ,correction of scissor bite was done on 0.019x0.025 SS wire with intermaxillary elastics i.e from modified TPA to buccal surface of 27. In about three months with good compliance of patient we could observe the bodily movemet of the second molar without any periodontal breakdown, or extrusion of the teeth.

Post treatment pictures



Figure 3

Conclusion

Since the invention of transpalatal arch by Goshgarian several modification of it have been introduced, this case report demonstrates that modified TPA is promising in treating the scissor bite effectively as well as less invasive compared to newer methods of intervention using the TADS, cost effective and also demands less chair side time .

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