

Modified Lingual Arch with Tongue Crib

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ABSTRACT

Over the years, several methods for correcting tongue thrust have been introduced. However, the correction of the habit of tongue thrust with removable and fixed tongue crib in any clinical situation has always been a matter of concern. This article presents a placement of modified lingual arch with tongue crib for correction of tongue thrust and also the improper positioning of tongue with a class I malocclusion in an adult patient.

Keywords: tongue, thrust, crib, lingual, mandibular, modified.

INTRODUCTION

Tongue thrust is an oral habit in which the infantile swallow pattern beyond childhood persists. During swallowing the tongue comes in between the teeth thereby resulting in proclination of both upper and lower anteriors and open bite.¹ Out of the many treatment modalities, a tongue crib is one of the most advanced treatment modality for the habit of tongue thrust.^[2,3]

Tongue crib is usually placed in the maxillary arch.^[3,4] According to Proffit anterior seal function is prevented by restraining the forward movement of the tongue with a tongue crib, thereby resulting in a changed pattern of deglutition.^[5] Meibodi in the year 2010 suggested the use of removable mandibular crib appliance to impede the habit of tongue thrust.^[6] The idea that provoked modified lingual arch with tongue crib was the interruption to speech caused by maxillary tongue crib. Maxillary tongue crib interferes with the movements of tongue with respect to hard palate, upper teeth, alveolar ridge and rugae area, thereby producing defective phonetics. The vocals that were affected by maxillary tongue crib included f, v, th, t, d, s, z, n, ch, sh, zh and j.^[7] We have proposed a modification of mandibular tongue crib appliance which is simple and easy to fabricate. This modified lingual arch with tongue crib has corrected the improper positioning of tongue along with the habit.

APPLIANCE DESIGN

Steps in fabrication were as follows:

1. Mandibular alginate impression was taken with the bands on first permanent molars. The plaster dental cast was then prepared.

2. The lingual arch with modification for tongue crib in mandibular anteriors area was formed with 0.8 mm stainless steel round wire and adapted with the mandibular first permanent molar bands, like in the (Fig. 1). The loops in the crib were three in number with height at incisal level of the mandibular incisors. The two U loops were made between the junction of the mandibular first and second premolars for any adjustments.
3. The modified lingual arch with tongue crib was soldered onto the molar bands, it was placed inside the patient's mouth and checked for any discomfort and interferences
4. The modified lingual arch with tongue crib was fixed inside patient's mouth by cementing the molar bands (Fig. 2) and the patient was educated to keep the tongue behind the crib.

CONCLUSION

This appliance is simple and easy to fabricate. It did not require any robotic wire bending. The modified lingual arch with tongue crib was better accepted by the patient. Oral hygiene instructions were similar as the maxillary tongue crib. No ulceration and gingival enlargement was seen.

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