Original Research Paper

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Dentistry

CUSTOMIZED ESSIX RETAINER FOR RETENTION AND HABIT CONTROL

Dr. Julius Mary	Medical Officer, Department Of Dentistry, Govt District Hospital.
Dr. Anjum Shaikh	Medical Officer, Department Of Dentistry, Govt District Hospital.
Dr. Divya Soni	Medical Officer, Department Of Dentistry, Govt District Hospital.
Dr. Shuchi Singh*	Professor, Rishiraj College Of Dental Science And Research Centre. *Corresponding Author
Dr. Janhavi Rane	Consultant Orthodontist.
Dr. Sweta Kaushik	Private Practitioner.

KEYWORDS :

INTRODUCTION

Habits are routine so behavior that individuals, including children, perform either consciously or unconsciously. Prolonged oral habits can negatively impact dental health and lead to malocclusion, depending on their intensity, duration, and frequency during growth and development [1].

Tongue thrusting is described as a condition wherein during swallowing the tongue contacts with teeth in the anterior region [1-2].

Ideally, oral habits must be eliminated preferably before establishing mechanotherapy. The role of tongue thrusting in the aetiology of malocclusion is still controversial, persistence of such harmful habit is thought to contribute to the relapse of orthodontic treatment [2].

If a patient has a forward resting position of tongue, the duration of this pressure (even light) could affect position of tooth.so, tongue thrusting plays a significant role in aetiology of many orofacial deformities [2].

Orthodontic retention is the last phase of orthodontic treatment procedure and its aim is to preserve the teeth in their new position after correction of malocclusion at the end of orthodontic treatment. Teeth have a natural tendency to come back in their original position after malocclusion correction because of stretch in periodontal fibres, especially fibres present around the necks of the teeth.There are various factors which influence final stability of teeth after treatment. Appropriate orthodontic diagnosis, treatment planning and the achievement of appropriate occlusal and soft tissue treatment goals can help to reduce orthodontic relapse [3].

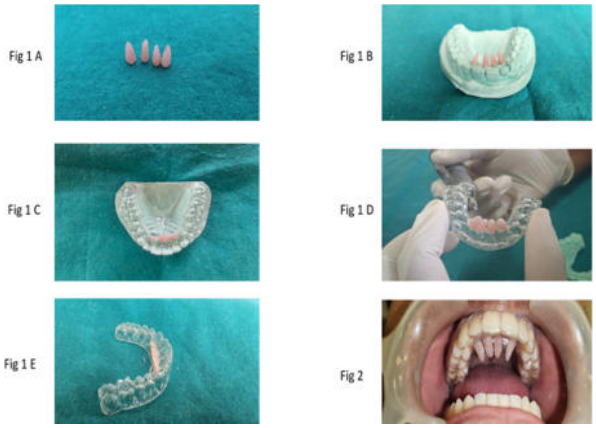
There are many retainers available which holds the tooth in corrected position but they do not incorporate any component to break the habit of tongue thrusting. Although Essix retainer with metal tongue crib is available, it is aesthetically unpleasant and bulky which is not comfortable from patients perspective [2].

Considering all these points, we created a new unique appliance in which vertical acrylic tongue spikes are embedded in Essix retainer itself (Fig. 1A to F). This appliance acts as a reminder therapy for the patient's tongue thrust habit. It Is aesthetically pleasant and not bulky so comfortable to patient.

We have attached the patient consent form and this innovation does not require any ethical approval statement.

Fabrication

1. Make 6.0-7.0 mm long 4 vertical acrylic spikes
2. Wait for acrylic to completely set and fix the spikes on the patient study cast anteriorly between canine and first premolar region.
3. Take 1 mm hard thermoforming sheet and make Essix retainer with normal method using vacuum forming/moulding machine. the acrylic spikes get embedded in the Essix retainer.
4. Remove the Essix retainer.
5. The Essix retainer which is made should be properly finished and polished. Make sure that it does not have sharp edges as it may cause discomfort to the patient during insertion.
6. A new customized Essix retainer with habit breaking spikes is ready for delivery to the patient (Fig. 1A to F).



A 23 years old male patient came to clinic with chief complaint of spacing between his upper front teeth. the patient has a history of orthodontic treatment and did not want any further orthodontic treatment. On examination, he revealed tongue thrusting habit. patient was given removable Howley's retainer with tongue crib but it was not acceptable to patient because of bulky nature and aesthetically unpleasing appearance (Fig 2).

Cessation of tongue thrusting habit was planned for this case.

Advantages

1. The appliance is given during retention phase of treatment, along with maintaining the arch form it also reduces the chance of recurrence of tongue thrusting habit.
2. The appliance acts as reminder therapy for the patient.
3. It is less bulky, so it is comfortable for patient.
4. Appliance is aesthetically pleasing.
5. It is cost effective so it is economic to the patient.

Limitations

1. Some individuals may experience temporary difficulty with speech.
2. The material can wear down or become discoloured with time leading to breakage or loss and may require replacements.

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