

TECHNICAL REPORT

A modified impression technique for a patient with mandibular exostosis.

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ABSTRACT

The mandibular torus is an exophytic osseous asymptomatic overgrowth often found bilaterally in the premolar region. Recording this structure in an impression is difficult. This article describes a technique of recording the mandibular tori with a modified stock tray. This novel method reduces discomfort and trauma to the patient and the entire surface of the tori is recorded.

Keywords: Impressions of tori, mandibular tori, modified impression technique, stock tray modification.

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INTRODUCTION

Torus is an exophytic osseous overgrowth. It is asymptomatic, bilateral and symmetrical growth often found in the lingual surface of the mandible in relation to the bicuspid and molar region superior to the mylohyoid. It is prevalent in 6%-7% population and commonly found amongst males in their fourth decade of life.¹ It is usually less than 2mm in size but can sometimes be large enough to meet at the midline. These large tori are called kissing tori.^{2,3} Tori can be smooth, bosselated and multilobulated. The tori develops due to excessive masticatory stress, genetics, vitamin deficiency and diet.² Lingual tori may at times hinder speech.⁴ Common problems that arise due to the presence of tori in denture wearing patients are ulceration, ill-fitting dentures due to lack of adaptation of the denture framework, compromised function of the prosthesis and hygiene.^{4,5}

The commonly used stock trays are inadequate in making impressions for patients with mandibular lingual tori due to the presence of the lingual flange that disturbs the complete coverage of the mandible. Thus stock trays ulcerate the thin soft tissue covering the tori.⁵ This limitation led to various innovations of impression trays to make accurate impression for mandibular tori. Fernandez et al⁵ used maxillary metal stock tray to make impression for the mandible with tori. But the presence of the palatal part of the tray lead to distortion and increased the dimensional changes. Yung-Tsung⁶ modified the maxillary metal stock tray by removing the palatal portion and adapting utility wax to make the tray. Boksmann and Carson⁸ used thermoplastic material to make impression trays that can be molded to the required shape and later cooled to retain the acquired shape. This article describes a technique of making an impression of mandibular ridge with tori.

TECHNIQUE DESCRIPTION

A 76-year-old female patient came to the Department of Prosthodontics for replacement of her missing teeth. She was completely edentulous in maxilla and had Kennedy's class II modification II (missing 31,32,33,41,42,43,44,45). Bilateral mandibular tori covered with thin layer of mucosa was detected lingual on both sides extending from lateral incisor to the second premolar region (12mm in length and 4mm height from lingual sulcus). (Fig 1). The use of a conventional stock tray was difficult as it was uncomfortable for the patient and it did not record the full extent of the sulcus. So, the following method was used to record the full extent of the mandibular ridge area.

1. The lingual flange of a mandibular plastic stock tray was removed. (Tray Size L2)
2. A metal mesh was cut according to the size of the mandibular arch and stabilized in the stock tray using light cure acrylic (Fig 2).



Figure 1: Clinical view of the mandibular tori

3. This metal mesh served as a support for the impression compound and green stick mixture (1: 6 ratio). This compound was used to mold the lingual



Figure 2: Lingual flange removed in stock tray. Metal mesh adapted and secured with light cure acrylic

flange, but extended only up to the height of the contour of the tori using hand manipulation. The undercut of the tori was not engaged (Fig 3).

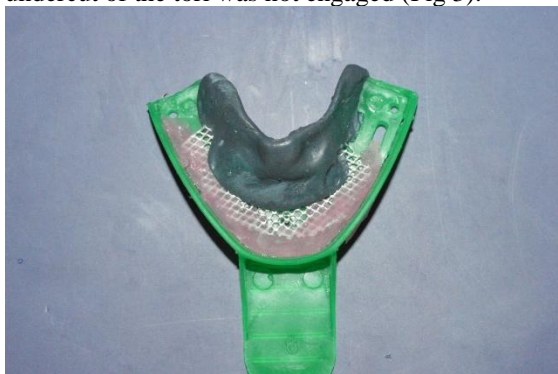


Figure 3: Impression compound and green stick compound adapted to serve as customized lingual flange

4. A little mixture of impression compound and green stick was added to the lingual flange and manipulated with hand so that it is made straight. This increases the depth of the sulcus without engaging the undercut. It also serves as a guide to allow the impression material to flow into the sulcus. The tray is passively placed back into the patient's mouth and checked for its extent (Fig 4).



Figure 4: Lingual view of the customized impression tray

5. An elastomeric impression with putty and light body was made. Elastomeric impression

material engaged the undercut and recorded the entire sulcus (Fig 5).



Figure 5: Putty light body impression made with the customized tray

6. Cast was poured with Type III dental stone (Fig 6).



Figure 6: Cast showing the entire mandibular surface

DISCUSSION

Cast partial dentures with lingual bars and other designs that interfere with the tori and complete denture flanges often disturbs the tori. Flexible dentures can be advised as a better treatment option for these patients. Abrams S⁽⁹⁾ constructed a complete denture for a patient with mandibular tori using three different denture base material. Injection molded acrylic was used for making denture base and buccal flange and thermoplastic resin was to make the lingual flange and the entire denture was lined with a resilient material. The thermoplastic material is semi rigid and the resilient liner provides cushioning effect and prevents the denture from lock in the undercuts of the tori. Ezzat AKH et al⁽¹⁰⁾ had designed a butterfly shaped major connector for the lingual removable partial denture.

The merits of this method include reduction of discomfort and trauma to the patient and the entire surface of the tori was recorded. This article gives a clinical tip to record the complete tori without the impression material getting locked in the undercut and ulcerating the superficial soft tissue during making of an impression for patients unwilling for surgical excision of tori as there is a risk of lingual nerve damage in cases of distally extended tori, infection and hemorrhage in the floor off the mouth.

LIMITATIONS

The procedure is time consuming and technique sensitive.

CONFLICT OF INTEREST

There is no conflict of interest

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