

## UNILATERAL MANDIBULAR TORUS IN A HYPERTENSIVE AND ALCOHOLIC PATIENT: A CASE REPORT

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### CASE REPORT

#### ABSTRACT

**Objective:** The objective of this case report is to report a case of unilateral mandibular torus in an adult patient with hypertension and alcoholism, highlighting the clinical characteristics, diagnosis, and management. **Methodology:** In the literature review, to obtain scientific articles, the main reference sources in articles, dissertations and abstracts published in congresses were searched in the databases, using the main portals in the health area such as PubMed, Scielo and Google Scholar, using the terms: Mandibular Torus, Dentistry, Surgery, in Portuguese and English as search words. After collecting the abstracts, the relevant articles were collected in full, read and used in the present study. The case report describes the clinical maneuvers performed on a 58-year-old male patient, hypertensive and alcoholic. **Conclusion:** Unilateral mandibular torus is a rare condition that is usually asymptomatic and can be managed conservatively. Correct diagnosis is essential to differentiate this condition from pathological lesions and avoid unnecessary interventions. This case highlights the importance of clinical examination and differential diagnosis of mandibular torus in patients with systemic risk factors, such as hypertension and alcoholism. Surgical management was sufficient in this case, but periodic follow-up is essential to monitor changes and prevent complications.

**Keywords:** Mandibular Torus, Dentistry, Surgery.

## TORO MANDIBULAR UNILATERAL EN UN PACIENTE HIPERTENSO Y ALCOHÓLICO: REPORTE DE UN CASO

### Resumen

**Objetivo:** El objetivo de este informe de caso es informar un caso de torus mandibular unilateral en un paciente adulto con hipertensión y alcoholismo, destacando las características clínicas, el diagnóstico y el manejo. **Metodología:** En la revisión de la literatura, para obtener artículos científicos, se buscaron en las bases de datos las principales fuentes de referencia en artículos, disertaciones y resúmenes publicados en congresos, utilizando los principales portales del área de la salud como PubMed, Scielo y Google Scholar, utilizando los términos: Mandibular Torus, Dentistry, Surgery, en portugués e inglés como palabras de búsqueda. Después de la recopilación de los resúmenes, los artículos relevantes fueron recopilados en su totalidad, leídos y utilizados en el presente estudio. El informe de caso describe las maniobras clínicas realizadas en un paciente masculino de 58 años, hipertenso y alcohólico. **Conclusión:** El torus mandibular unilateral es una condición rara que generalmente es asintomática y puede manejarse de forma conservadora. El diagnóstico correcto es esencial para diferenciar esta condición de lesiones patológicas y evitar intervenciones innecesarias. Este caso resalta la importancia del examen clínico y el diagnóstico diferencial del torus mandibular en pacientes con factores de riesgo sistémicos, como hipertensión y alcoholismo. El manejo quirúrgico fue suficiente en este caso, pero el seguimiento periódico es fundamental para monitorear los cambios y prevenir complicaciones.

**Palabras clave:** Toro mandibular, Odontología, Cirugía.

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## **1. Introduction**

Mandibular torus is a benign, usually bilateral, bone exostosis located on the lingual surface of the mandible. Its etiology is multifactorial, involving genetic, mechanical stress, and environmental factors. Although it is asymptomatic in most cases, it can have clinical implications in specific situations. Alves and Neves (2011), in a study published in the Brazilian Journal of Dentistry, evaluated the incidence and characteristics of palatine and mandibular tori in patients treated at a dental clinic. The study identified a significant prevalence of these exostoses in adults, with mandibular torus being more frequent in men, while palatine torus was more frequent in women. The authors highlighted that factors such as heredity, functional stimuli, and anatomical characteristics are associated with the development of these bone formations. Although usually asymptomatic, tori can interfere with prosthetic or surgical treatments, requiring diagnostic attention and appropriate management. The study reinforces the need for a detailed approach in clinical examinations, considering the relevance of these findings for dental planning.

The study conducted by Karaiskos *et al.* (1989), published in *Odontostomatol Proodos*, investigated the clinical and epidemiological characteristics of mandibular torus. The research analyzed the prevalence, distribution by sex, age and anatomical location, as well as the possible etiological factors associated with the formation of this exostosis. The results indicated a higher prevalence of mandibular tori in men, with a higher incidence in middle-aged adults. The most common location was in the lingual region of the mandible, close to the premolars. Factors such as functional stimuli, including masticatory forces, and genetic predisposition were highlighted as contributing to the development of mandibular torus. The study concludes that, although generally asymptomatic, mandibular tori can have clinical implications, especially in cases involving the creation of prostheses or surgical procedures. These findings emphasize the importance of proper diagnosis for effective dental management.

The book “*Tratado de Patologia Bucal*”, by Shafer, Hine and Levy (2012), is a reference work in dentistry, covering the main pathological conditions that affect the oral cavity. Among the topics discussed, the authors detail the clinical characteristics, etiology, differential diagnosis and management of various bone anomalies, including mandibular and palatine tori. The text highlights that tori are benign exostoses, generally asymptomatic, that develop due to factors such as heredity and mechanical stimuli. Mandibular tori are found on the lingual surface of the mandible, while palatine tori appear on the hard palate and are more common in certain populations. Although they do not require treatment in most cases, they can interfere with prosthetic and surgical procedures, requiring removal when clinically indicated. The work reinforces the importance of a thorough clinical examination and a multidisciplinary

approach to the management of these conditions, contributing to evidence-based dental practice. The objective of this case report is to report a case of unilateral mandibular torus in an adult patient with hypertension and alcoholism, highlighting the clinical characteristics, diagnosis, and management.

## **2. Methodology**

In the literature review, to obtain scientific articles, the main reference sources in articles, dissertations and abstracts published in congresses were searched in the databases, using the main portals in the health area such as PubMed, Scielo and Google Scholar, using the terms: Mandibular Torus, Dentistry, Surgery, in Portuguese and English as search words. After collecting the abstracts, the relevant articles were collected in full, read and used in the present study. The case report describes the clinical maneuvers performed on a 58-year-old male patient, hypertensive and alcoholic. As this is a case report, it was necessary to use Yin's work (2001) as a guide for how the structure, approach and constitution of this type of article should be, serving as support during the completion of this work, giving it greater security and organization.

## **3. Results**

The patient, a 58-year-old male, was admitted to the Integrated Clinic I of the Recife School of Dentistry on September 5, 2024. His main complaint was the difficulty in making a lower removable prosthesis due to the presence of a large bony protrusion in the lingual region of the mandible, referred to by the patient himself as a "large bone" (Figure 1).



Figure 1: Initial photo of the Mandibular Torus

During the anamnesis, it was found that the patient was hypertensive, taking Losartan 50 mg and Amlodipine 10 mg continuously. In addition, he reported daily consumption of alcoholic beverages, indicating a history of chronic alcoholism. During the initial consultation, detailed guidance was provided, highlighting the harm that excessive alcohol consumption can have on general health and the potentially

detrimental impact on the postoperative recovery process. The patient was made aware of the importance of reducing or stopping alcohol consumption before and after the surgical procedure. Based on the clinical information and analysis of the condition, a surgical plan was drawn up to remove the mandibular torus. Preoperative laboratory tests were requested and analyzed to ensure the feasibility of the procedure, which was scheduled for October 24, 2024. On the day of the surgery, the patient's blood pressure was checked, which initially showed high levels (Figure 2). After a calm conversation and a period of rest, the pressure was reassessed and found to be within safe limits for carrying out the procedure.



Figure 2: Measuring blood pressure

Local anesthesia was performed using 3% Prilocaine hydrochloride with Felypressin, considering the need for strict control to avoid hypertensive peaks. A linear incision was made in the lingual mucosa of the mandible, maintaining safety margins, followed by careful detachment of the mucoperiosteal flap for complete exposure of the bony exostosis (Figure 3).

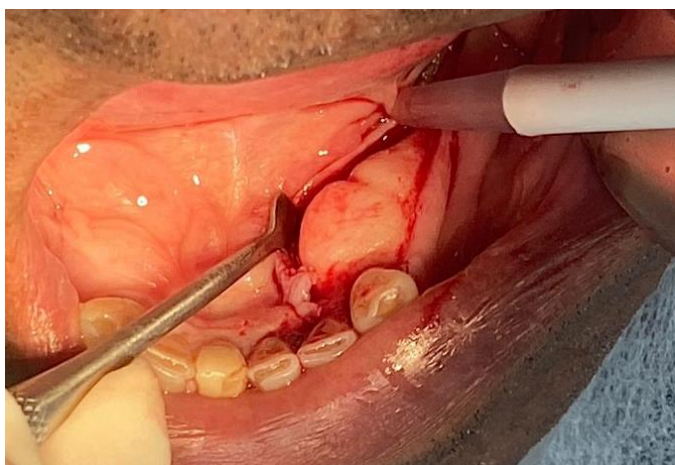




Figure 3: Complete exposure of bony exostosis

The removal of the mandibular torus was initiated using a low-speed drill, accompanied by continuous irrigation with saline solution, in order to outline the bone contour and avoid overheating (Figure 4). After this step, the high-speed surgical drill was used to optimize the operative time, reducing patient discomfort (Figure 5). The removal was performed gradually, minimizing trauma to the adjacent tissues, and the bone edges were regularized to ensure smoothness and functional comfort (Figure 6). Finally, simple suturing was performed in a linear pattern to reposition the flap.

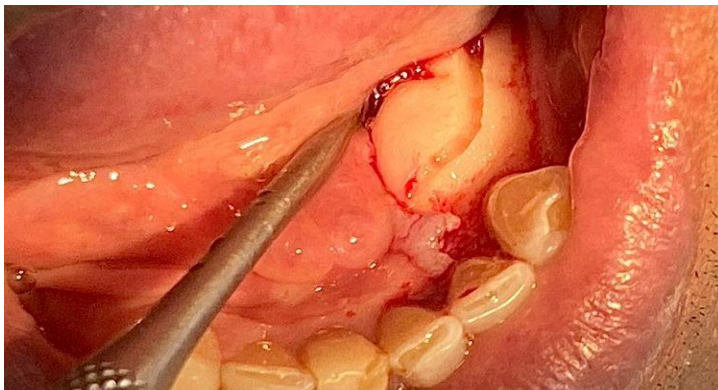


Figure 4: Bone delineation



Figure 5: Using the high-speed surgical drill

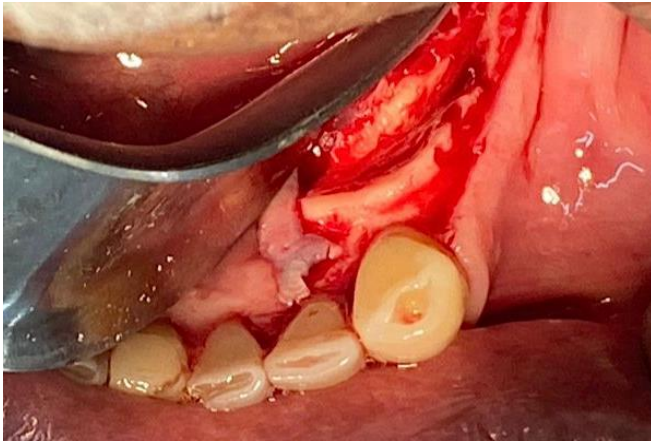


Figure 6: Beginning of regularization of bone edges

At the end of the procedure, the patient received a prescription containing essential medications for the postoperative period, including Amoxicillin 500 mg (8/8 hours for 7 days), Ibuprofen 600 mg (8/8 hours for 3 days) and Paracetamol 750 mg (used as needed to control pain). In addition, instructions were reinforced for maintaining good oral hygiene, using a 0.12% chlorhexidine mouthwash, eating properly, resting and, above all, stopping drinking alcohol. One week after the procedure, the patient returned for evaluation and removal of the suture. The area was in an excellent state of healing, with no signs of inflammation or infection, and the patient reported complete relief from the initial symptoms (Figure 7). With the success of the surgery, the patient was released to continue with prosthetic planning.



Figure 7: Surgical result one week after the procedure

The case reinforces the importance of rigorous preoperative control, especially in patients with comorbidities such as hypertension and alcoholism, and the relevance of a precise surgical technique and clear postoperative guidelines to ensure treatment success.

#### **4. Discussion**

One of the great curiosities about the torus is the fact that its origin has not yet been clarified by science, however, much of the evidence indicates that its appearance is caused by genetic, environmental and even nutritional disorders. The etiology of the torus is widely debated, with its main pathological causes being heredity and the process of continuous growth, associated with reactions of muscular forces incident on the region or due to cortical bone apposition. From a clinical perspective, in most cases the mandibular torus is found on the lingual surface of the mandible, superior to the mylohyoid line, in the region of the lower premolars, and can vary in size from 3 to 4 cm but are less than 1.5 cm in diameter, with characteristics of a rounded shape in most cases, eminence of hard bones, smooth surface and covered by a normal mucosa. Removal of the mandibular torus is usually indicated when it is causing pain in the thin mucosa, when the patient is undergoing a total or partial lower prosthesis or in cases where the mucosa is suffering trauma with some frequency. In certain cases, the mandibular torus was removed to be used as an autogenous graft, such as: patients who need a sinus lift; however, more research is needed on this use, in addition to more cases proving the post-surgical efficacy.

Through imaging tests, the mandibular torus can be visualized on radiographs as a circumscribed area of high radiopacity overlap on the roots of the lower teeth. The torus can even appear on periapical radiographs, being histologically similar to a normal bone, but in reality it presents a hyperplastic bone of compact structure, with a spongy part located in the center and with medullary spaces. When it comes to the removal of the mandibular torus, most authors and researchers state that it should be done using a chisel and hammer combined with a rotary instrument, others state that the use of the rotary instrument alone is sufficient, but that it depends on the size of the torus, being relative in each case.

Performing a biopsy is unnecessary in most cases, however, a differential diagnosis is essential, so that other pathologies can be ruled out, such as: osteosarcomas, osteochondromas, osteomamas and other pathologies, which, despite having distinct biological characteristics and behaviors, can mimic the radiological and clinical picture.

#### **5. Conclusion**

Unilateral mandibular torus is a rare condition that is usually asymptomatic and can be managed conservatively. Correct diagnosis is essential to differentiate this condition from pathological lesions and avoid unnecessary interventions. This case highlights the importance of clinical examination and differential diagnosis of mandibular torus in patients with systemic risk factors, such as hypertension and alcoholism. Surgical management was sufficient in this case, but periodic follow-up is essential to monitor changes and prevent complications.





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