



UNUSUAL APPEARANCE OF MULTIPLE EXOSTOSIS: CASE REPORT

ABSTRACT

Unilateral mandibular bone exostosis located in the buccal region is a rare condition. A 25-year-old female who presented with unilateral mandibular bone exostosis had her clinical diagnosis confirmed using cone beam computed tomography. Additionally, a nodular torus palatinus was found in the midline of the palate. Wear faces on the vestibular cusps of 46 as well as thickening of the periodontal ligament space were present. Both are signs of occlusal trauma. The presence of mandibular tori could indicate other underlying conditions, such as the presence of parafunctional activity or systemic health conditions. Mandibular exostosis can remain for life without the need to be surgically removed unless it compromises prosthetic rehabilitation.

Key Words: Exostosis, torus palatinus, torus mandibularis, case report.

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INTRODUCTION

Intraoral exostosis is an abnormal growth of the bone tissue of a benign nature. The mechanism of its development is still unknown, and several related factors have been reported, such as hereditary conditions, excessive occlusal function and/or parafunctional activity, some systemic conditions, sex and age.^{1,2}

Usually, the torus palatinus is located in the midline of the palate. Most mandibular tori cases are bilateral and are located in the lingual surface of the premolar region.³ The growth of mandibular tori is very slow and variable, and in most cases, bilateral tori are present. Mandibular tori can also present with different sizes and shapes such as flat, spindle, nodular and lobular excrescences.⁴

This article describes the clinical case of a unilateral mandibular bone exostosis of a nodular shape located in the vestibular area of the mandibular first and second right molars in a young patient who also presented a torus palatinus.

CASE REPORT

A 25-year-old female patient with a medical history of hyperthyroidism and orthodontic and myofunctional treatments visited the dental clinic. The patient had a family history of torus palatinus. During the routine clinical evaluation, two nodular protuberances of hard consistency were observed along the midline of the palate and in the vestibular area of right mandibular first and second molars (teeth 46 and 47, respectively). The oral examination revealed an asymptomatic consistent nodular protuberance in the vestibular region of teeth 46 and 47, with a thin yellowish-white soft tissue. Wear faces were observed in the vestibular cusps of 46. (Figure 1) In addition, the patient presented lateral deviation of the mandible towards the right side during buccal opening and a habit of biting her right cheek.

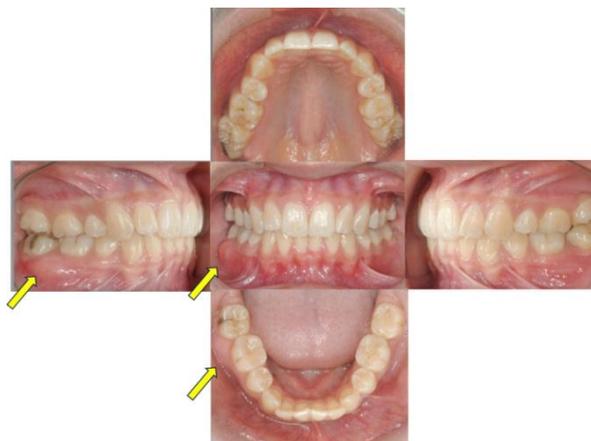


Figure 1. Intraoral photos showing a nodular protuberance in the midline of the hard palate and in the vestibular region of teeth 46 and 47, wear faces are observed in vestibular cusps of the first molar.

The panoramic radiograph showed a radiopaque area with well-defined borders and diffuse edges, projected over the apex of the maxillary central incisors, compatible with torus palatinus. (Figure 2a)



Figure 2a. Panoramic radiography showing a radiopaque area with well-defined borders and diffuse edges, projected over the apex of the maxillary central incisors, compatible with torus palatinus.

Digital periapical radiography showed superficial occlusal fillings on teeth 46 and 47 with a slight widening of the periodontal ligament space in the mesial root of tooth 46. (Figure 2b)



Figure 2b. Periapical radiograph confirming an increase in density below the periapical area of 46.

A slightly greater radiodensity was present compared to the circumscribed bone, and bone trabeculation had a normal morphology and density.

Cone-beam computed tomography was requested for a three-dimensional evaluation and was performed with J Morita Veraviewepocs 3D Equipment (J. Morita MFG. Corp., Kyoto, Japan) with a FOV of 40x40 mm, 80 kV and 6 mA. A hyperdense, homogeneous and rounded area with a regular edge was observed. The cortical bone along teeth 46 and 47 was thickened when observed on the axial and coronal views (Figure 2c).

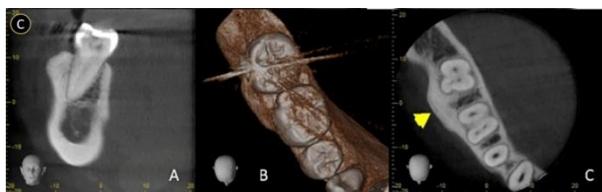


Figure 2c. Right: Coronal view showing a buccal hyperdense structure on the cortical bone. Middle: 3D reconstruction of the region showing a homogeneous area with regular edges. Left: Axial view showing the increased thickness of the cortical bone along the vestibular region of the parts of 46 and 47 compatible with bone exostosis.

This appearance was compatible with bone exostosis. Since the patient was asymptomatic, no surgical intervention was required.

DISCUSSION

The presence of an exostosis usually goes unnoticed by the patient and is diagnosed as an incidental finding. Exostosis could occasionally present complications during the evolution of some oral pathologies. Additionally, the thin oral mucosa that covers the underlying bone could have some lacerations after contact with a hard structure. Unilateral mandibular exostosis located in the vestibular region, as observed in the present case report, is not common since this growth usually occurs in the lingual area and has a bilateral presentation.⁵

The presence of wear faces on the occlusal areas of 46 as well as the thickening of the periodontal ligament space are signs of occlusal trauma. Several studies agree on the multifactorial aetiology of mandibular bone exostosis, with genetic factors being one of the most prevalent⁶, followed by parafunctional activity.⁷ Cortes *et al.*⁸ found a higher concentration of mechanical stress in areas with exostosis. A close relationship has

also been reported between the presence of dental attrition, dental wear facets and the presence of mandibular tori.⁹ Therefore, the combination of genetic background, parafunctional activity and absence of Gardner's syndrome directed the diagnosis towards a bone exostosis located in the patient's mandible.

The differential diagnosis must be made to exclude a peripheral osteoma, which is a benign bone growth lesion from the periosteum.¹⁰ However, the radiographic findings of peripheral osteomas appeared as a radiopaque, round or oval bone circumscribed lesion. The base is often attached to the underlying cortical bone as a pedunculated lesion; occasionally, the osteoma may also have a broad base. The presence of exostosis constitutes a risk factor in systemically compromised patients. Osteonecrosis cases involving tori have been reported in patients taking bisphosphonate medication.¹¹ The relationship between primary hyperparathyroidism and exostosis has also been studied, showing a reduction in the mandibular cortex width where growth is common, loss of the lamina dura and the appearance of frosted glass.¹²

Regarding treatment, surgical removal is not usually indicated unless there is persistent trauma to the lining of the mucosa and in cases where the use of a dental prosthesis is indicated. In these cases, osteotomy and remodelling will be necessary for prosthesis placement.¹³ In the present case report, the lesion was asymptomatic. Therefore, no surgical treatment was necessary.

CONCLUSIONS

The presence of mandibular exostosis could indicate other underlying systemic or local conditions as parafunctional activity. Mandibular exostosis can remain for life without the need for surgical intervention unless it compromises prosthetic rehabilitation.

PATIENTS' CONSENT

Informed consent was obtained from the patient to publish the data concerning this case.

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None

CONFLICTS OF INTEREST STATEMENT

The authors declare no conflicts of interest.

ÖZ

*Bukkal bölgede yer alan tek taraflı mandibular kemik ekzostoza nadir görülen bir durumdur. Klinik tanısı koni ışınli bilgisayarlı tomografi ile doğrulanan tek taraflı mandibular kemik ekzostozisi olan 25 yaşında bir kadın hasta. Ek olarak, damak orta çizgisinde nodüler torus palatinus bulundu. 46 vestibüler kapakta aşınma yüzleri ve periodontal ligament boşluğunun kalınlaşması mevcuttu. Her ikisi de oklüzal travma belirtileridir. Mandibular tori varlığı, parafonksiyonel aktivite veya sistemik sağlık koşulları gibi diğer altta yatan durumları gösterebilir. Mandibular ekzostoz, protez rehabilitasyonundan ödün vermedikçe cerrahi olarak çıkarılmasına gerek kalmadan ömür boyu kalabilir. **Anahtar Kelimeler:** Ekzostoz, torus palatinus, torus mandibularis, vaka raporu.*

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