

Torus palatinus. Report of two cases

María Lorena Re Domínguez, Rosalba Riveros, Tatiana Moreno, Beatriz María Di Martino Ortiz, Mirtha Rodríguez Masi, Oilda Knopfmacher, Lourdes Bolla de Lezcano

Department of Dermatology, Clinicas Hospital, Faculty of Medical Sciences, National University of Asuncion, Paraguay.

Corresponding author: Prof. Dr. Beatriz María Di Martino Ortiz, E-mail: beatrizdimartino@gmail.com

ABSTRACT

The torus is a non-neoplastic slow growing bone protuberance, which is usually manifested before the age of 30; Set in the hard palate is called “Torus Palatinus”, and located in the lower jaw - “Torus mandibularis”. In most cases, the diagnosis is usually incidental, during clinical examination, due to other reasons. The reason is that they are usually asymptomatic and patients are not aware of carrying a torus; hence the conservation treatment, unless it poses problems for the patient. We report two cases of incidental detected palatal torus in women.

Key words: Exostosis; Torus palatinus; Torus mandibularis

INTRODUCTION

Hyperostosis is defined as a benign neoformation of bone tissue, diffused or localized hypertrophy thereof. In the oral cavity can affect the lingual surface of the mandibular bone (torus mandibularis), the hard palate (torus palatinus) or presented as multiple exostosis [1]. The latin word torus means tumor or circular protrusion and is not considered as a pathological condition, but an anatomical variation. The term torus is introduced by Kupfer and Besselhagen in 1879, and is used to designate the exostosis arising on the midline of the palate and the back and inside of the jaw [2].

These bony growths are usually found in adults and occur after puberty. There is a predilection for females 2:1, in the palatal torus; as reported by several studies mandibular torus occurs most often in men [2,3]. It is estimated that 20-25% of the population, including Asian, Native American Indians and Eskimos have some torus, which are more common in women than men. According to the Institute of Reference of Oral Pathology, University of Chile, the frequency of torus in white Americans is 25%, 19% in black Americans and in Chile the prevalence corresponds to 37% [2].

The prevalence is between 6 and 8% in the United States

and reaches 25% in other populations worldwide [1-3], while the incidence of mandibular torus is estimated below 8% [2,4]. Tori are more prevalent between 11 and 30 years old and very rare appearance before the age of 10. According to Eggen and Natvug, it is more frequent between 10 and 49 years old, and rare appearance after 50 [1-3].

Regarding its pathogenesis genetically originated are believed in large measure, but local factors micro stress and trauma can be contributory [3,5,6]. According to a research study conducted by Morrison MD and F. Tamimi, published in 2013, there was a statistically significant association between the presence of temporomandibular joint dysfunction, or the presence of dental wear, hypertension and predisposition to develop palatinus torus [5,6]

Pei-Jung Chao and colleagues [7], by a study conducted in 2013 among 119 hemodialysis patients and published in 2015, ruled the relationship between hyperparathyroidism raised as a cause of development of oral torus in chronic hemodialysis patients.

Clinically [1,2], manifest as compact prominences covered with healthy looking mucosa, they are usually asymptomatic, especially less than 1.5 cm;

How to cite this article: Re Domínguez ML, Riveros R, Moreno T, Di Martino Ortiz BM, Rodríguez Masi M, Knopfmacher O, de Lezcano LB. Torus palatinus. Report of two cases. Our Dermatol Online. 2016;7(2):169-171.

Submission: 10.10.2015; **Acceptance:** 01.02.2016

DOI: 10.7241/ourd.20162.45

They are characterized by a well defined, unilateral or bilateral slow, benign, circumscribed bone growth. The torus can be located only under masticatory; ulcer resulting from trauma can take weeks to months to heal because the underlying bone tissue is poorly vascularized. They can be confined to the anterior or posterior part of the palate and in some cases may be spreaded throughout the midline from the pit prior to completion cleft of the hard palate. These abnormalities are usually symmetrical. According to their shape, palatal tori are divided into levels, unilobulados, multilobed, nodular, irregular or fusiform; the latter are the most common.

In histopathology [1-3]: the torus is characterized by dense bone outgrowth of a laminated pattern and small spaces occupied by thick bone marrow or scattered fibrovascular stroma, where you can observe minimum osteoblastic or occasional periosteal activity activity.

Tori require treatment when they are large, alter the phonatory function, generate dental displacement or produce trauma and ulceration of the mucosal surface, when they interfere with hygiene and are the cause of halitosis, but especially when preclude the placement and use of total or dentures. When treatment is indicated, the lesions can be cut or removed surgically, cutting from its base binding [1-3].

CASE REPORTS

Case 1

77 years old white female, housewife, from an urban area of Paraguay, hospitalized for community-acquired pneumonia, evaluated by dermatology by a raised lesion about 6-8 years of evolution, which gradually increased in size without accompanying symptoms. Tobacco, alcohol and other underlying pathologies refuses. Using of dental prosthesis smoothly. Family history is negative. Physical exam: unilobulated tumor of about 1 cm, net limits and regular edges, bright erythematous, smooth, solid stone consistency that is located on midline of hard palate (Fig. 1). Punch biopsy was taken for histopathology.

Case 2

30 years old white and healthy female, , from an urban area of Paraguay, with no personal or family history of

pathological value evaluated in a routine examination of a raised lesion found on the hard palate; it is present since adolescence and is asymptomatic. *Physical exam:* oval tumor, unilobular, 1.5 x 1 cm in diameters, net limits, regular edges, covered by bright erythematous mucosa, of solid consistency, smooth surface, located on hard palate (Fig. 2). Punch biopsy was taken for histopathology.

Histopathology

At the base of the biopsy mature trabecular bone with osteoblastic rim, with osteocytes in lacunae covered by a cartilage cap formation. The intertrabecular space has vascular connective stroma, with no bone marrow (Fig. 3).

Final diagnosis in both cases: Torus palatinus.

Management

Patients were evaluated by dentistry and maxillofacial surgery, and because they do not have symptoms, periodical controls were indicated.



Figure 1: Clinical case 1.



Figure 2: Clinical case 2. In both cases oval unilobular tumor, 1.5 cm in its great dimension, net limits, regular edges, covered by bright erythematous mucosa, of solid consistency, smooth surface, resting on hard palate.

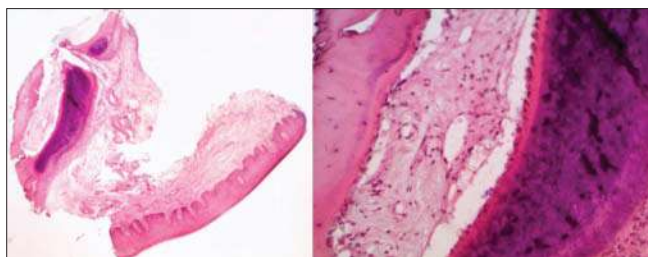


Figure 3: Histopathology. Mature trabecular bone with osteoblastic rim at the base of the biopsy (HE4X left), with osteocytes in lacunae covered by a cartilaginous cap formation. The intertrabecular space has vascular connective stroma, with no bone marrow (HE 40X right).

DISCUSSION

There are several research, case reports and case series publications on the torus, which mention that it is a benign oral pathology, most frequent between the second and the third decades, and is usually discovered unintentionally in the context of a query. According to the retrospective and descriptive study, carried out by Miranda-Gutierrez C., et al. [2], in patients attending the dental clinic at the Regional Military Hospital of Acapulco, during the period from January 1 to May 31 of the year 2013, the prevalence of torus was 3.88% torus. Females had a higher proportion of 1/427, while the male 1/887. In the age range 46-50 years is where the highest prevalence was presented with a percentage of 24%. In most cases (88.6%), did not require any treatment. These data are consistent with our two findings torus in women, young adult, and the other postmenopausal, in whom conservative treatment was raised.

Morrison MD., et al. described the Torus Palatine, as the most common intra oral exostosis among postmenopausal women [5], which could be due to the fact that they are asymptomatic, the diagnosis is made during routine visits or upon need for some type of dental prosthesis.

In fact, despite being a condition that is described as more frequent before 50 years of age, there are several case reports [3,6,8,9] and case series of fortuitous findings in older women as the case of one of our patients. It is rare in men but there are some case reports [10].

CONCLUSION

Torus Palatinus exostosis is a benign pathology, more common in women, and rare appearance after age 50; being asymptomatic in most patients, the finding is usually casual, hence the importance that general practitioners, dermatologists, dentists and pathologists are familiar with this disease, in order to make a correct diagnosis and management, avoiding perform surgical unnecessary treatments.

Consent

The examination of the patient was conducted according to the Declaration of Helsinki principles.

REFERENCES

1. Sinisterra G, J Alvarez, Molano PE. Spontaneous exposure of a torus palatine midline. *Biomedical*. 2013;33:31-5.
2. Miranda Gutiérrez CR, Sánchez Cruz MG. Torus palatinos y mandibulares en pacientes que acuden a consulta al Servicio de Odontología del Hospital Militar Regional de Acapulco, Guerrero. *Rev Sanid Milit Mex*. 2014;68:272-5.
3. Garcia-Garcia AS, Martinez-Gonzalez JM Gomez-Font R, Soto-Rivadeneira A, Oviedo-Roland L. Current status of the torus and torus mandibularis palatinus. *Oral Med Oral Pathol Oral Cir*. 2010;15:e353-60.
4. Sources FR, EE Borie, CA Sanhueza, SK Rebolledo Parra VP. Presencia oral exostosis in patients from the city of Temuco, Chile. *Advances in dentistry Rev*. 2012;28:1-5.
5. Morrison MD, Tamimi F. Oral Local tori are Associated With mechanical and systemic factors: a case-control study. *Maxillofac J Oral Surg*. 2013;71:14-22.
6. Vaduganathan M, Marciscano A, Olson KR. Torus palatinus. *Proc (Bayl Univ Med Cent)*. 2014;27:259.
7. Chao PJ, Yang HY, Huang WH, Weng CH, Wang IK, Tsai AI, et al. Oral tori in chronic hemodialysis patients. *Biomed Res Int*. 2015;2015:897674.
8. Lai WS, Shih CP. Triple Torus Palatinus. *Indian J Med Res*. 2014;139:788.
9. Bennett W. Images in clinical medicine: Torus Palatinus. *N Engl J Med*. 2013;368:1434.
10. Ladizinski B, Lee KC. A Nodular Protuberance on the hard palate. *JAMA*. 2014;311:1558-9.

Copyright by María Lorena Re Domínguez, et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Source of Support: Nil, **Conflict of Interest:** None declared.