

Prevalence of palatine torus, mandibular torus and oral exostosis in patients attended at the clinic of the faculty of dentistry of the private university of the east



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ABSTRACT

Background: These excre benign conditions in the oral cavity due to bony growths of the protuberance type known as hyperostosis; they are found mainly at the level of the bony palate and mandibular region. **Objective:** This study was conducted with

the objective of determining the prevalence of palatine torus, mandibular torus and oral exostosis in patients attending the clinic of the Faculty of Dentistry of the Universidad Privada del Este. **Materials and methods:** A cross-sectional observational study was conducted in the clinic of the Faculty of Dentistry of the Universidad Privada del Este. A sample of 137 patients was selected over a period of 2022 – 2023. Demographic information was collected from patients, such as age and gender. It was evaluated by means of an intraoral and radiographic clinical examination performed by the students. The collected data were statistically analyzed using chi-square tests to determine prevalence. **Results:** It was obtained from the studied population that 42% (n: 58) of the population has palatine torus (PT), while the Mandibular Torus (TM) of 21% (n: 29), 7 % (n: 10) with Oral Exostosis (EB) and 14% (n: 20) associated PT and TM and EB with some type of T was 4% (n: 5). **Discussion:** There is a higher prevalence of palatine torus in the female gender 68% (n:38), while the mandibular torus has a higher prevalence in the male gender 59% (n:17). Regarding oral exostosis, a relatively low prevalence was found in the sample studied.

Keywords: Maxillary exostosis, palatine torus, mandibular torus, epidemiology, oral cavity

1 INTRODUCTION

The maxillary bones are part of the body skeletal structure so they are not alien to the pathologies that occur in it. Some bear resemblance to each other, others are very unique for their pathognomonic characteristics, for example, the palatine torus, the mandibular torus and the exostoses of the jaws (1).

Exostoses are bone protuberances that arise from the bony cortical tables, they are benign anomalies, usually affecting the jaws. These entities have very specific sites, the palatine torus is found only in the midline of the hard palate, the mandibular torus is found on the lingual surface of the jaw,



near the bicuspid tooth. The oral exostosis is found only on the facial surface of the alveolar bone essentially of the maxillary alveoli, the other bone proliferations in other atypical sites can be caused by trauma, periosteal reactions, inflammations or neoplasms (3), they begin with their growth process after puberty until the third decade of life (2).

The presence of palatine and mandibular torus can affect the planning and execution of various dental procedures, such as impression taking, denture placement, and oral surgery. Knowing its prevalence will help oral health professionals prepare properly and make safer and more efficient interventions.

In determining the prevalence of torus, the possible association with specific risk factors, such as age, gender, ethnicity, and family history, can be investigated. These findings could provide insight into the possible etiological mechanisms of these bone outgrowths and help identify patients most likely to develop them. Knowledge of prevalence in a specific population is important for dental treatment planning and clinical care.

2 MATERIALS AND METHODS

A cross-sectional observational study with a quantitative approach was carried out in the clinic of the Faculty of Dentistry of the Universidad Privada del Este, specifically in the chairs of Oral Pathology and Semiology II. Data collection was conducted over a period of time between 2022 and 2023. The patient sample composed of 137 was selected from those who attended the clinic during the mentioned period. Demographic information such as the age and gender of each patient was collected.

2.1 TORUS

- Conceptual Definition: they are protuberances, non-neoplastic, nodular of bone (4)
- Operational Definition: For our study the operational definition took into account:
 - Absence or presence of a bony protrusion.
 - Anatomical location:

Palatine Torus: Nodular and sessile bone mass arising along the midline of the hard palate.

Mandibular Torus: Exophytic bone expansion arising along the lingual border of the mandible above the crest of the mylohyoid muscle.

- Shape: The classification given by Shafer was used: Lobular, nodular, flat and fusiform.

2.2 EXOSTOSES

- Conceptual Definition: Partial hypertrophy, limited to the surface of a bone or tooth (4)
- Operational Definition: Overflowing growths located in the mandibular vestibular alveolar portion or vestibular and palatine portion of the alveolar portion of the maxilla.

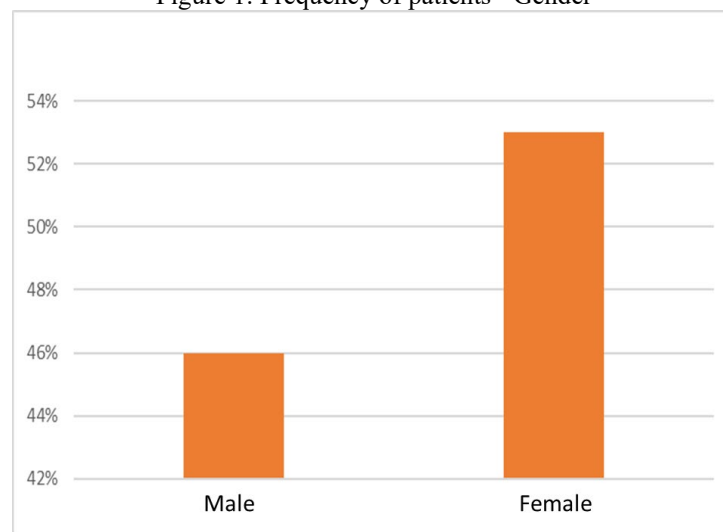


The presence of palatine and mandibular torus was evaluated by means of an intraoral clinical examination carried out by students of the career, under the supervision of specialized professors. In addition, occlusal radiography was used to complement the clinical evaluation in certain cases.

The collected data were statistically analyzed using chi-square tests to determine the prevalence of torus in the sample studied. Likewise, the corresponding ethical aspects were applied through the informed consent of the patients, guaranteeing their voluntary participation and confidentiality of the information collected.

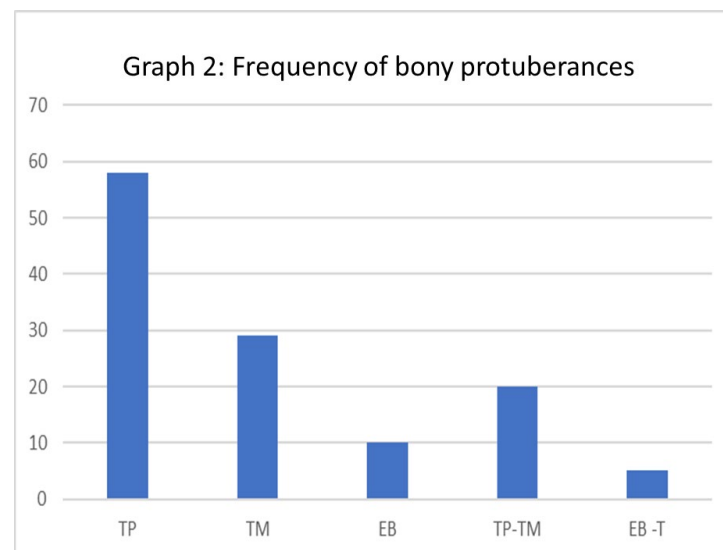
3 RESULTS

Figure 1: Frequency of patients - Gender



Source: the researchers

Graph 2: Frequency of bony protuberances



Source: the researchers

4 DISCUSSIONS

Of the 137 participants, 46% (n: 63) correspond to the male gender while 54 (n: 74) are female;



The average age is 29 years (8 - 56 years) in agreement with the literature that mentions that average is 30 years (3)

The frequency of bone excrescences found was Palatine Torus (PT) is 42% (n: 58), Mandibular Torus TM is 21% (n: 29), Oral Exostosis (EB) is 7 % (n: 10), PT and TM in the same patient is 14% (n: 20) and EB with some type of T was 4% (n: 5), observing that it is PT that occurs most frequently in assisted patients.

While the average according to gender was as follows:

TP: 65% (n:38) for females; while 35% (n:20) for the male gender

TM: 41% (n:12) for females; while 59% (n:17) for the male gender

EB: 70% (n:7) for females; while 30% (n:3) for the male gender

TP and TM: 70% (n:14) for females; while 30% (n:6) for the male gender

T with EB: 60% (n:3) for females; while 40% (n:2) for the male gender

It is observed that there is a higher prevalence of PT in the female gender; while TM is predominant in the male gender. The presence of both excrescences (PT with TM) was observed more frequently in the female gender.



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