



ISSN: 0975-833X

Available online at <http://www.journalcra.com>

*International Journal of Current Research*  
Vol. 11, Issue, 06, pp.4966-4969, June, 2019

DOI: <https://doi.org/10.24941/ijcr.35763.06.2019>

**INTERNATIONAL JOURNAL  
OF CURRENT RESEARCH**

## RESEARCH ARTICLE

### MANDIBULAR EXOSTOSIS INVOLVING LOWER ANTERIORS- A RARE CASE REPORT

**Dr. Shashikanth Hegde, Dr. Jyosthna G Madhurkar, Dr. Rajesh Kashyap, Dr. Arun Kumar Maiya and Dr. Vijay Desai**

<sup>1</sup>MDS- Professor and HOD, Dept of Periodontology, Yenepoya dental college, Yenepoya (Deemed to be) University, Deralakatte Manglore -575018

<sup>2</sup>MDS (Post graduate student), Dept of Periodontology, Yenepoya dental college, Yenepoya (Deemed to be) University, Deralakatte Manglore -575018

<sup>3</sup>MDS, Professor, Dept of Periodontology, Yenepoya dental college, Yenepoya (Deemed to be) University, Deralakatte Manglore -575018

<sup>4</sup>MDS, Professor, Dept of Periodontology, Yenepoya dental college, Yenepoya (Deemed to be) University, Deralakatte Manglore -575018

<sup>5</sup>Assistant Professor, Ajman universality, Ajman, UAE

#### ARTICLE INFO

##### Article History:

Received 29<sup>th</sup> March, 2019

Received in revised form

24<sup>th</sup> April, 2019

Accepted 15<sup>th</sup> May, 2019

Published online 30<sup>th</sup> June, 2019

#### ABSTRACT

Buccal exostosis is Benign, smooth, broad-based bony growth on the facial aspect of maxilla or mandible. The etiology has been studied but no consensus has been reached so far. A 55-year-old female reported with the complaint of swelling in the lower anterior region. Patients prime concern was esthetics and the etiology was unclear, the bony enlargement was treated with resective osseous surgery. This article presents a case report of mandibular buccal exostosis and its management. Subject Area: Periodontology

#### Key Words:

Exostosis, Esthetics, Surgical Excision.

#### \*Corresponding author:

Copyright © 2019, Shashikanth Hegde et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Dr. Shashikanth Hegde, Dr. Jyosthna G Madhurkar, Dr. Rajesh Kashyap, Dr. Arun Kumar Maiya and Dr. Vijay Desai , 2018. "Mandibular exostosis involving lower anteriors- a rare case report", *International Journal of Current Research*, 11, (06), 4966-4969.

## INTRODUCTION

Tori, exostoses and osteomas are nodular protuberances of mature bone, the precise designation of which depends on anatomic location (Jainkittivong, 2000). Torus palatinus and torus mandibularis (TM) are the two most common typical intraoral osseous outgrowths. TM is a bony protuberance located on the lingual aspect of the mandible, commonly in the canine and premolar areas. Buccal and palatal exostoses are multiple bony nodules that occur less frequently than tori (Jain, 2014). Exostosis are bony hamartomas, which are asymptomatic, benign, exophytic nodular outgrowths of dense cortical bone that are relatively avascular. They are mainly of two types: buccal and palatal exostosis. These benign growths affect both the jaws. Maxilla is shown to exhibit the highest prevalence rate of 5.1:1 in comparison to mandible with a male

population affected more than females 1.66:1, in all intraoral locations (Chandna, 2015). The etiology of tori has been investigated by several authors; however, no consensus has been reached. Some of the postulated causes include genetic factors, environmental factors, masticatory hyperfunction, and continued growth (Eggen, 1989; Gorsky, 1998). Gorsky et al. summarized that the etiology of this common osseous outgrowth is probably multifactorial, including environmental factors acting in a complicated and unclear interplay with genetic factors (Gorsky, 1996). Buccal exostoses occur as smooth, bony growth along the facial aspect of the maxillary and/or mandibular alveolus. Commonly found to appear in the premolar-molar region. On palpation, the exostoses are hard bony mass. The overlying mucosa appears to be stretched but intact and normal in color. Ulcerations may be seen as a result of trauma or any injury to the mucosa. They tend to develop during adolescence and gradually enlarge over the years.

They are normally self-limiting and painless. Their size may increase to several centimeters thus contributing to periodontal disease of adjoining teeth by retaining food during chewing instead of flushing away. Usually no treatment is required, but for those possibly affecting the periodontal condition, or when the protuberances cause pain or discomfort to the patient, or when these bony enlargements cause pseudo swelling over the lip, then conservative surgical excision can be performed (Medsinge, 2015). The histologic features of tori and exostoses are identical. A very small exostosis and tori consist entirely of compact bone but when large and nodular, it consists of cancellous bone surrounded by cortical bone (Neville, 1995).

With the growing emphasis on cosmetic dentistry and esthetics especially among the youngsters, surgical removal is routinely warranted for such lesions. The case report presented below illustrates the mandibular buccal exostosis and its successful management

## CASE REPORT

A 55-year-old female patient reported to the Department of Periodontology, Yenepoya dental college Manglore, complaining of swelling in the lower anterior region of the jaw, interfering with her smile and aesthetics (Fig 1 and 2). History revealed slow, but steady enlargement of the mass over the past 2 years, no associated symptoms with this region. The patient had no history of trauma to the involved area. No contributing medical history was reported. Physical examination of the oral cavity revealed, overgrowth was located on the buccal aspect of the mandible in the incisor and canine areas (Fig1 and 2). The lesion was bony-hard on palpation, overlying mucosa was thin and blanched, nonulcerated and generalized moderate gingivitis was seen. The bony mass was oblong in shape, extending from mesial of 33 to mesial of 43 and found to be diffuse. It did not interfere with speech, chewing or other oral functions. Gingival examination revealed presence of false pockets in relation to 41, 42. Occlusal evaluation showed Angles class 1 malocclusion with overjet and overbite of 2mm. Radiographic examination did not reveal any abnormalities (Fig 3). The bony protuberance caused by the thickening or enlargement of the cortical plate of the facial surface of the mandible without any systemic abnormality helped us to draw the diagnosis as buccal exostosis.

**Treatment:** Treatment included patient education, scaling and root planing, oral hygiene instructions and periodontal resective osseous surgery. Patient was prescribed 0.12% chlorhexidine gluconate mouth rinse twice daily. Routine blood investigations were carried out and were found to be within normal limits. An informed consent was taken. Local anesthesia was injected, as the contour of the gingiva was uneven and presence of false pockets, gingivectomy was carried out in relation to 41, 42 (Fig 4 and 5), a full thickness mucoperiosteal flap was elevated by placing sulcular incision extending from distal of 33 to distal of 43 and vertical incision to gain complete access to the bone mass (Fig 6 and 7). The bony growth was removed using bone ronger and with bone cutting carbide bur, No 702 SS white under continuous saline irrigation (Fig 8 and 9). Care was taken to ensure that the crest of the marginal bone was left undisturbed. After removal of the osseous growth, the flaps were positioned on a trial basis, and surgical site was palpated to determine the need for further recontouring (Fig 10). On obtaining the desired result, the flap was secured with 3-0 mersilk simple interrupted sutures (Fig 11).



Fig. 1. Pre- operative



Fig. 2. Pre operative



Fig. 3. OPG



Fig. 4. Pocket Marker and 5 Gingivectomy incision



Fig. 5. Pocket Marker and 6 Gingivectomy incision



**Fig. 6. Gingivectomy incision**



**Fig. 11. Silk sutures placed**



**Fig. 7. Full thickness flap exposing bony growth**



**Fig. 12. Post operative 1 week**



**Fig. 8. Eliminating the bone growth with rongeur**



**Fig. 13. Post operative 1 month**



**Fig. 9. Osseous recontouring with rotary carbide bur**



**Fig. 14. Post operative 6 months**



**Fig. 10. Contoured bony architecture**

Routine postoperative instructions were given. The medications prescribed were, 500 mg amoxicillin 8 h for 5 days and 400 mg ibuprofen every 8 h for 3 days. Patient was recalled after 1 week for suture removal, Patient did not have any post operative discomfort (Fig 12). Subsequently the patient was reviewed after 1, 3 and 6 months for further postoperative follow-up (Fig 13,14,15). The resected bony spicules were sent for histopathological examination and found that material was indeed just native bone that is, exostosis.

## DISCUSSION

Buccal exostoses are non-malignant lesions of little clinical significance. The multiple masses in the maxilla are consistent with multiple buccal exostoses, which are bony protuberances that arise from the cortical plates in the maxilla and mandible. Many continue to enlarge slowly over time. The etiology of the multiple exostoses remains unknown, although it has been suggested to be the outcome of a mild, chronic periosteal inflammation. The diagnosis of a buccal exostosis is based on clinical and radiographic findings (Medsinge, 2015; Neville, 1995). Neither the torus nor the bony exostosis require treatment unless it becomes large enough to interfere with function, denture placement, cause recurring traumatic surface ulceration (usually from sharp food such as potato chips or fish bones) or as used to get autograft as it is a potent donor site<sup>9</sup>. As the prime concern of patient was esthetics, case was subjected for surgical intervention. The highest prevalence was found in the adults who were aged 60 years or more (21.7%), as compared to the group which was aged 13 to 19 years (7.8%). The other age groups of 20 to 29 years, 30 to 39 years, 40 to 49 years and 50 to 59 years demonstrated similar frequencies. As for the gender, there is a higher prevalence in the male subjects (Pynn, 1995). Radio graphically, they present in the maxilla as well-delimited radiopaque masses, many times hiding the details of the teeth and the maxillary sinus. In the mandible, they simulate the mandible lesions such as bone deformities, osteomyelitis and the Gardner's syndrome; but anamnesis and appropriate laboratory tests can easily provide the definite diagnosis (Siegel, 1986). The mucosa that covers the bone protuberance is normally superficial and it has a normal appearance, but if it is exposed to trauma, it may become whitish and ulcerated (Bansal, 2013). Buccal exostoses occur along the buccal aspect of the maxilla or mandible, usually in the premolar and molar areas. Its occurrence on the canine region is an extremely rare occurrence. It has been suggested that the bony outgrowth may be due to increased occlusal forces due to malalignment of teeth or occlusal interferences (Jain, 2014). Osteoplasty and osteotomy techniques were carried out using combination of rotary and hand cutting instruments.

## Conclusion

Proper diagnosis and treatment plan is key in the management of bony exostosis and tori as it can pose esthetic as well as functional problems. Clinician has to be careful in the osseous recon touring which is critical in the management of bony growth.

## REFERENCES

- Bansal M., Rastogi S., Sharma A. 2013. Multiple mandibular exostoses: a rare case report., 7(8):1802-1803.
- Chandna S., Sachdeva S., Kochar D., Kapil H. 2015. Surgical management of the bilateral maxillary buccal exostosis. *J Ind Soc Periodontol.*, 19(3):352-355.
- Eggen S. 1989. Torus mandibularis: An estimation of the degree of genetic determination. *Acta Odontol Scand.*, 47:409-415.
- Gorsky M., Bukai A., Shohat M. 1998. Genetic influence on the prevalence of torus palatinus. *Am J Med Genet.*, 75:138-140.
- Gorsky M., Raviv M., Kfir E., Moskona D. 1996. Prevalence of torus palatinus in a population of young and adult Israelis. *Arch Oral Biol.*, 41:623-625.
- Jain R., Kapoor D., Sujay. J 2014. Mandibular exostosis in canine with single tooth recession – A rare case report. *J Int Oral Health.*, 6(4):89-91.
- Jainkittivong A., Langlais RP. 2000. Buccal and palatal exostoses: prevalence and concurrence with tori. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.*, 90:48-53.
- Medsinge SV., Kohad R., Budhiraja H., Singh A., Gurha S., Sharma A. 2015. Buccal exostosis: A rare entity. *J Int Oral Health.*, 7(5):62-64.
- Neville BW., Damm DD., Allen CM., Bouquot JE. 1995. (Editors). *Oral and Maxillofacial Pathology*, Philadelphia: WB Saunders Co. p. 17-20.
- Puttaswamaiah RN., Galgali SR., Gowda VS. 2011. Exostosis: a donor site for autograft. *Indian J Dent Res.*, 22(6):860-862.
- Pynn BR., Kurys-Kos NS., Walker DA., Mayhall JT. 1995. Tori mandibularis: a case report and review of literature. *J Can Dent Assoc.*, 61: 1057-1059.
- Seah YH. 1995. Torus palatinus and torus mandibularis: a review of the literature. *Aust Dent J.*, 40 (5): 318-321.
- Siegel WM., Pappas JR. 1986. Development of exostoses following skin graft vestibuloplasty: report of a case. *J Oral Maxillofac Surg.*, 44:483-84.

\*\*\*\*\*