

SURGICAL REMOVAL OF PALATAL BONY EXOSTOSIS: A CASE REPORT

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Abstract

Bony exostosis is a slow growing, benign bony overgrowth that slowly grow over the patient's lifetime. They consist of dense, compact, cortical bone. They are avascular in nature. Most of them are asymptomatic. However, surgical removal of exostoses is indicated when the patients feel discomfort due to its presence and their presence interferes in function like mastication, deglutition, speech etc. In some patient difficulty during prosthetic rehabilitation with removable prosthesis is also a reason for their surgical removal. This article presents a case report of surgical removal of a palatal bony exostosis, which was making patient uncomfortable. Frequent ulcerations of overlying mucosa during mastication and deglutition and apprehension of patient led to treatment plan of its complete surgical excision.

Key words: Exostosis; hard palate, diagnosis, surgical excision

Introduction

In the head and neck region true benign non-odontogenic tumours consisting of bone (either compact or cancellous) are occasionally seen, but localised overgrowths of bone (exostoses) are more common. They consist of lamellae of compact bone, but large specimens may have a core of cancellous bone. Specific variants of exostosis which develop on specific anatomic sites are named *torus* (plural *tori*). When an exostosis develop on midline of the hard palate they are termed as "*torus palatines*". And when exostosis develop on the lingual aspect of the mandible opposite the mental foramen, they are termed as "*torus mandibularis*". However, mandibular tori are typically bilateral. When any exostosis interferes with the fitting of a denture or if patient is uncomfortable with presence of it, or it is interfering in oral functions, then it should be removed.

Case Report

A 47-year-old man presented with hard nodule in the left side of hard palate in relation to palatal aspect of maxillary left premolars and first molar. (Figure 1)



Figure 1: - Intraoral view of the Palatal bony exostosis

Patient complained of frequent trauma of palatal mucosa during mastication leading to difficulty in swallowing. Patient was very apprehensive about the cause of this swelling in his oral cavity. A detailed medical history, family history and dental history was taken and thorough examination was done. On extraoral examination no gross facial asymmetry found; lymph nodes were non-palpable. On intraoral examination bony hard growth covered in normal oral mucosa in relation to maxillary left premolars

& 1st molar region was elicited. The bony overgrowth was non tender, without any discharge and fluctuation test was negative. The growth was located in the palatal cortical plate extending from 24, 25 to 26 region, measuring about 1.8 cm x 1.6 cm x 1.2 cm. A diagnosis of palatal bony exostosis was made.

Investigations

Before performing surgery the routine laboratory blood investigations were done and all parameters were found to be in normal range.

Differential Diagnosis

- Compact osteoma
- Cancellous osteoma
- Osteochondroma
- Organized subperiosteal hematoma
- Mature ossifying fibroma (expanding cortical lamina)
- Periosteal osteosarcoma or chondrosarcoma

Treatment

As the palatal bony exostosis was impairing the basic physiological functions of the patients, it was decided to completely remove it surgically, under local anaesthesia. All possible potential complications were explained to the patient. A written informed consent was obtained from the patient. Intraoral pre-surgical preparation was done with chlorhexidine mouthwash. To achieve profound local anaesthesia, posterior superior alveolar nerve block and greater palatine nerve blocks using local anesthetic 2% Lignocaine with 1:80,000 adrenaline were administered to the patient. Surgical incision was made and full thickness mucoperiosteal flap was raised & palatal bony exostosis was completely exposed (Figure 2). Surgical bur & chisel mallet was used for complete excision of the palatal bony exostosis (Figure 3). Bone file was used to smoothen the sharp and rough edges of the bone and haemostasis was achieved. Copious irrigation was done while performing surgical excision. Flap was re-approximated and surgical site was closed by 3-0 mersilk suture (Figure 4). Post-

operative instructions were given orally as well as in written form. Post-operative medications like antibiotics and analgesics were prescribed to the patient. After seven days, patient was recalled for check-up and suture removal. The wound was found to be healing without any complications.



Figure 2: - Incision made, flap raised and palatal bony exostosis was exposed



Figure 3: - Surgical removal of palatal bony exostosis



Figure 4: - Post – operative intraoral view: Surgical site closed by 3-0 mersilk suture

Outcome and Follow-Up

Patient was followed up after a month and later after six months to examine any change or recurrence of the lesion. Patient was extremely satisfied by the treatment outcome and admitted that it led to improvement in his quality of life. No complication was observed during treatment and follow up.

Discussion

Exostoses were first reported in medical literature by Fox.² Exostoses and tori are localized peripheral overgrowths of bone due to some unknown cause. Although etiology is unknown, a hereditary basis is suspected. Racial and ethnic differences have been shown in other studies of

exostoses.^{3,4,5} They occur on any surface of the jaw bones. When multiple small nodular protuberances appear on the buccal or palatal surfaces of the alveolar bone, they are called exostoses. When a bony protuberance occurs in the midline of the palate, it is called a torus palatinus; and when it occurs on the lingual surface of the mandible, it is called a torus mandibularis.

Generally, surgical resection is not required for maxillary palatal exostosis, as long as the condition remains asymptomatic. Occasionally some of them may be slowly enlarging and may recur even after complete surgical excision. However, they are absolutely benign and do not turn malignant. Maxillary palatal exostosis does not require treatment unless it becomes so large that It interferes with function or denture placement, suffers from recurring traumatic surface ulceration during mastication of sharp foods or contributing to a periodontal condition.^{6,7,8}

Conclusion

Exostoses are localized overgrowths of bone due to some unknown cause. Exostoses or tori may need to be surgically removed when they are causing interference in the fabrication of prosthesis or functions. In the case presented, the patient had a clear concept of the procedure prior to providing the informed consent, the procedure was uneventful, and the patient was satisfied with the result.

References

1. Cawson RA, Odell EW. Cawson's Essentials of oral pathology and oral medicine. 7th ed. Churchill Livingstone; 2002. p. 138.
2. Fox J. Natural history and diseases of human teeth. E. Cox: London; 1814.
3. Sonnier KE, Horning GM, Cohen ME. Palatal tubercles, palatal tori, and mandibular tori: Prevalence and anatomical features in a U.S. population. J Periodontol 1999;70(3):329-36.
4. Nery EB, Corn H, Eisenstein IL. Palatal exostosis in the molar region. J Periodontol 1977;48(10):663-6.
5. Touyz LZ, Tau S. Frequency and distribution of palatal osseous alveolar marginal exostoses. J Dent Assoc S Afr 1991;46(9):471-3.
6. Jainkittivong A, Langlais RP. Buccal and palatal exostoses: Prevalence and concurrence with tori. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2000;90(1):48-53.
7. Dutta SR, Varghese D, Bhuihar A, Desai R. Mandibular exostosis. Dental Impact 2013;5(1):28-33.
8. Larato DC. Palatal exostoses of the posterior maxillary alveolar process. J Periodontol 1972;43(8):486-9.

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