IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 25, Issue 3 Ser. 1 (March. 2026), PP 48-49
www.iosrjournals.org

Surgical Management Of Non-Syndromic Multiple Osteomas In The Maxillofacial Region: A Case Report

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Abstract:
Multiple osteomas in the maxillofacial region are uncommon and may present functional and esthetic challenges. Surgical excision remains the treatment of choice when they interfere with mastication, speech, or prosthetic rehabilitation. The use of a prefabricated guiding splint aids in precise bone contouring, prevents over-resection, and facilitates postoperative healing. A 65 year-old male presented with multiple bony protuberances in the maxillary and mandibular arches, causing discomfort during mastication, speech and hindering prosthesis placement. Clinical and radiographic examinations confirmed multiple sessile bony growths, suggestive of suspected osteoma or exostosis. Surgical excision was carried out under general anesthesia. The postoperative period was uneventful, and follow-up after 6 months revealed satisfactory results.
Keywords: *Osteoma, Exostosis, surgical excision*

Date of Submission: 28-02-2026 Date of Acceptance: 08-03-2026

I. Introduction

Osteomas are benign, slow-growing osteogenic neoplasms characterized by the proliferation of compact or cancellous bone. Intraoral exostoses, including torus palatinus and torus mandibularis, are developmental bony outgrowths of unknown etiology, occasionally associated with parafunctional habits or genetic predisposition. Multiple osteomas may occur as part of syndromic conditions, such as Gardner's syndrome, but can also present sporadically[1]. Multiple exostoses in maxillary and mandibular arches are commonly localized overgrowth of the jaw bone and need to be distinguished from other lesions, notably osteomas, which may be diagnostically very significant[2,3]. These occur along the maxillary or the mandibular regions and are frequently located in the premolar and the molar regions[4]. In the jaws, depending on the anatomic location, they are named as torus palatinus (TP), torus mandibularis (TM), or buccal bone exostoses[5].

II. Case Report

A 65-year-old male patient reported to us with a chief complaint of bony protuberances in the tooth bearing region of the upper and lower jaws since 6 months. Dental history revealed history of full mouth extraction 4 months back. Patient gave no history of any syndromes, clinical features were also consistent. Intraoral examination revealed completely edentulous maxillary and mandibular arches with six painless, nodular, hard protuberances measuring approximately 1.5 X1 cm present bilaterally in relation to the maxillary arch, two masses measuring approximately 1.5X1 cm in relation to the lingual aspect of the mandible bilaterally and one measuring approximately 4.5X1.5 present anteriorly in relation to the mandibular arch. The overlying mucosa was thin and intact with no ulceration or blanching. Surgical excision was planned under general anaesthesia. Intraoperatively, crestal incisions were made in relation to both the maxillary and mandibular arches. Full-thickness mucoperiosteal flaps were elevated to expose the bony protuberances. A prefabricated guiding splint was placed intermittently during the procedure to verify ridge height and contour and surgical reduction.

III. Discussion

The etiology of tori is not clear, but the most commonly accepted cause is genetics, although the autosomal dominant nature has been found to be proven only in approximately 29.5% of the cases[1]. Another common cause is superficial injuries to the overlying mucosa, especially in individuals with well-developed chewing muscles or in patients with abraded teeth due to occlusion[7]. Other rare causes include eating habits, vitamin deficiency, and drugs inducing increase in calcium hemostasis[8, 9]. Surgical excision is usually not indicated unless they interfere with the normal functions of the oral cavity, produce difficulty in maintenance of oral hygiene in dentulous patients, cause technical difficulty in denture fabrication, predispose to any periodontal problems, or become inflamed or ulcerated. Excision of the mandibular tori is usually a safe and predictable procedure with minimum postoperative sequela. Smaller tori can be easily reduced with flame-

shaped burs. However, gross reduction of adequately larger-sized torus can lead to accumulation of osseous debris underneath the flap, which can compromise healing[3].

Multiple osteomas and exostoses are rare occurrences in both jaws. Although benign, their size, location, and multiplicity may pose clinical challenges.

IV. Conclusion

Surgical management by excision of multiple osteomas in edentulous arches is the treatment of choice for achieving desirable prosthetic rehabilitation.

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