

Unusual Case of Multiple Non Syndromic Peripheral Osteoma of the Jaws: A Case Report

Fahim Oumaima*, Lachkar Amal, Haitami Sofia, Ben Yahya Ihsane

Department of Oral Surgery, Faculty of Dental Medicine, University of Hassan II, Casablanca, Morocco

*Corresponding author: oumaimafahim6@gmail.com

Received April 16, 2025; Revised May 17, 2025; Accepted May 25, 2025

Abstract Osteomas are benign, slow growing, osteogenic tumors resulting from the proliferation of mature compact or cancellous bone. Three variants are recognized: central, peripheral, and extraskeletal. The peripheral type is the most common. It mostly affects the paranasal sinuses, and rarely occurs in the jaws. Osteomas can be either solitary or syndromic. Multiple maxillofacial osteomas are often associated with Gardner's syndrome. We report a case of a 31-year-old woman with a nonsyndromic multiple peripheral osteoma affecting both the maxilla and the mandible, which was managed at the oral surgery department of the dental consultation and treatment center of Casablanca.

Keywords: Osteomas, osteogenic tumors, peripheral osteoma

Cite This Article: Fahim Oumaima, Lachkar Amal, Haitami Sofia, and Ben Yahya Ihsane, "Unusual Case of Multiple Non Syndromic Peripheral Osteoma of The Jaws: A Case Report." *Oral Surgery, Oral Medicine, Oral Radiology*, vol. 7, no. 1 (2025): 1-3. doi: 10.12691/oral-7-1-1.

1. Introduction

Osteomas are a rare benign osteogenic tumors, characterized by slow and continuous proliferation of compact and cancellous bone [1,2,3].

Three types are observed: the peripheral osteoma that develops from the periosteum, the central type that originates from the endosteum and the extraskeletal one that arises from muscles [4,5].

The peripheral type rarely affects the jaws, and it may be solitary or associated with Gardner's syndrome, especially when multiple [5].

The aim of this paper is to report a case of a nonsyndromic multiple peripheral osteoma, occurring in the jaws of a 31-year-old woman, who was surgically treated.

2. Case Presentation

A 31-year-old patient ; in apparently good general health, presented with discomfort related to bony masses "balls" in the jaws, that had been slowly evolving for 15 years.

Extra-oral examination showed no abnormalities [Figure 1](#).

Intra-oral examination showed sessile exophytic masses in the buccal region of both maxilla and mandible, that were firm and painless upon palpation. The lesions were covered by mucosa of normal appearance, but distended and thinned [Figure 2](#).



Figure 1. Extra-oral image



Figure 2a. left profile intra oral image



Figure 2b. right profile intra-oral image showing multiple exophytic masses

The orthopantomogram showed a radiopaque image superimposed on tooth 25, surrounded by a dense border. Other sites showed no specific radiological pattern [Figure 3](#).



Figure 3. Orthopantomogram showing a radiopaque image superimposed on tooth 25

Based on the clinical and radiological data, torus and osteoma were considered.

The treatment involved surgical excision and bone regularization, performed by quadrant over multiple sessions [Figure 4](#).



Figure 4. Intra-operative image after surgical excision and bone regularization [1: left maxillary area, 2 right maxillary area, 3 mandibular area]



Figure 5. 12 month follow-up images

Per-operatively, the lesion was limited to the cortical bone.

An antibiotic, a non-steroidal anti-inflammatory drug, an analgesic and a mouthwash were prescribed.

The specimen was sent for histopathological examination, which confirmed the diagnosis of an osteoma.

At the 12 month follow-up, the patient was asymptomatic with no sign of recurrence [Figure 5](#).

3. Discussion

Peripheral osteoma arises from the periosteum, and occurs primarily in the paranasal sinuses, and rarely in the jaws, with a predilection for the mandible [\[6,7,8\]](#). During surgery, the excision involved only the cortical bone, confirming this type of osteoma.

It mostly occurs between the 2nd and 5th decades of life [\[2,9\]](#), with an average age of 42 years according to retrospective studies. As for gender, there is a wide disparity and results depending on studies.

Osteoma can be solitary (nonsyndromic) or associated with Gardner's syndrome [\[9\]](#), an autosomal dominant condition, caused by a mutation in the Adenomatous Polyposis Coli (APC) tumor suppressor gene [\[10\]](#). This disorder is characterized by the presence of multiple osteomas, most frequently in the cranio-maxillofacial area, sebaceous cysts, colorectal polyposis, and other intestinal signs (rectal bleeding, diarrhea, and abdominal pain) [\[2,6,9\]](#). Our patient presented with gastric troubles, and was referred to a gastroenterologist. After undergoing the necessary examinations, no signs of Gardner's syndrome were found.

The etiology remains unclear. Some researchers believe that it may be a true neoplasm or a developmental anomaly. While others suggest that it results from an osteogenic reaction to infection, trauma or muscle traction [\[1,2,3,11,12\]](#). No infectious or traumatic factors were identified in our case.

Clinically, it appears as slow-growing exophytic mass, sessile or pedunculated, with a mushroom-like shape, usually asymptomatic [\[2,13\]](#). Its size ranges from 10 to 40mm, but it can reach larger dimensions [\[14\]](#), leading to swelling, facial asymmetry, severe dysfunction, mandibular deviation, limitation of mouth opening or dysphagia, depending on the affected region [\[5,11,13\]](#).

Radiologically, It appears as a well-defined, homogeneous radiopaque lesion, usually round or oval. Cone beam computed tomography is considered the best imaging technique for this condition, as it provides the exact lesion's location, type (pedunculated or sessile) and

extent, especially in large lesions [2,6,15]. In this case, as the osteomas were located in the maxillary alveolar ridges, CBCT was not performed to avoid unnecessary radiation exposure for the patient.

Differential diagnoses include: exostoses, periosteal osteoblastoma, parosteal osteosarcoma, osteoid osteoma, complex odontoma or peripheral ossifying fibroma... [1,6,12,13,14].

The positive diagnosis is based on the correlation of clinical, radiological and histopathological findings [3,13].

The treatment of osteomas involves a complete surgical excision of the lesion [7,9], recommended only for symptomatic or progressive osteomas [3,16]. It can be either intraoral or extraoral, depending on the size and location of the lesion [2]. In our case, an intraoral approach was carried out in multiple sessions without any complications.

The prognosis of osteomas is good. Recurrence is very rare, and no malignant transformation has been reported in the literature. However a long term follow-up is advised [2,3,7]. At the 12 month follow-up, our patient was asymptomatic and showed no signs of recurrence. She remains under observation.

4. Conclusion

Nonsyndromic multiple periosteal osteomas of the jaws are uncommon bony tumors.

Patients with multiple osteomas should undergo thorough clinical and radiographic assessments, including a detailed family and medical history to rule out a Gardner's syndrome, as it can occur on its early stages. This approach is important to guide an appropriate treatment and improve the overall patient's prognosis.

References

- [1] Ozturk H, Torul D, Yuçer E, Karli R, Baris S. Peripheral Osteoma of Mandibular Angulus: Analysis of the Literature and Report of a New Case. *Odvotos-Int J Dent Sc.* 24 sept 2018; 20(2): 61-70.
- [2] Sayit AT, Kutlar G, Idilman IS, Gunbey PH, Çelik A. Peripheral osteoma of the mandible with radiologic and histopathologic findings. *Journal of Oral and Maxillofacial Radiology.* avr 2014; 2(1): 35.
- [3] Batra N, Batra R, Singh G, Gaur A. Peripheral osteoma of maxilla: A case report. *National Journal of Maxillofacial Surgery.* déc 2014; 5(2): 240.
- [4] Shaw SE, Chan CH. Non-Odontogenic Tumors of the Jaws. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 [cité 24 sept 2024]. Disponible sur: <http://www.ncbi.nlm.nih.gov/books/NBK576441/>.
- [5] Shiradhonkar A, Jangid M, Tito V, Kurien V, Humne R, Khan S. An Uncommon Case of Peripheral Osteoma of the Maxilla: A Case Report. *Cureus.* janv 2023; 15(1): e33437.
- [6] Bountaniotis F, Melakopoulos I, Tzerbos F. Solitary Peripheral Osteoma of the Hard Palate Case report and literature review. *Sultan Qaboos Univ Med J.* mai 2017; 17(2): e234-7.
- [7] Geron ABG, Carvalho VA, Santos JLD, Almeida LY, León JE, Trivellato AE, et al. Surgical Management of Traumatic Peripheral Osteoma of the Mandible. *J Craniofac Surg.* juin 2017; 28(4): e405-8.
- [8] Mehta R, Yadav A, Bansal SP, Deshpande MD. Solitary Periosteal Osteoma of the Mandible: A case report. *Sultan Qaboos Univ Med J.* févr 2014; 14(1): e145-148.
- [9] Kshirsagar K, Bhate K, Pawar V, SanthoshKumar SN, Kheur S, Dusan S. Solitary Peripheral Osteoma of the Angle of the Mandible. *Case Rep Dent.* 2015; 2015: 430619.
- [10] D'Agostino S, Dell'Olio F, Tempesta A, Cervinara F, D'Amati A, Dolci M, et al. Osteoma of the Jaw as First Clinical Sign of Gardner's Syndrome: The Experience of Two Italian Centers and Review. *J Clin Med.* 14 févr 2023; 12(4): 1496.
- [11] Bhatt G, Gupta S, Ghosh S, Mohanty S, Kumar P. Central Osteoma of Maxilla Associated with an Impacted Tooth: Report of a Rare Case with Literature Review. *Head Neck Pathol.* déc 2019; 13(4): 554-61.
- [12] Kucukkurt S, Özle M, Baris E. Peripheral osteoma in an unusual location on the mandible. *Case Reports.* 21 déc 2016; 2016: bcr2016216554.
- [13] Khandelwal P, Dhupar V, Akkara F. Unusually Large Peripheral Osteoma of the Mandible – A Rare Case Report. *Journal of Clinical and Diagnostic Research: JCDR.* 1 nov 2016; 10(11): ZD11.
- [14] Özarslantürk, S, Şençimen M, Avsever H, Cevizcioğlu ÖO. (PDF) Peripheral Osteoma in Maxilla: Clinical Report [Internet]. [cité 19 nov 2024]. Disponible sur: https://www.researchgate.net/publication/357452032_Peripheral_Osteoma_in_Maxilla_Clinical_Report.
- [15] Turki IM. Ostéome périphérique mandibulaire : une observation clinique / A peripheral osteoma of the mandible: a case report - *Annales africaines de médecine* [Internet]. 2022 [cité 19 nov 2024]. Disponible sur: <https://anafrimed.net/osteome-peripherique-mandibulaire-une-observation-clinique-a-peripheral-osteoma-of-the-mandible-a-case-report/>, <https://anafrimed.net/osteome-peripherique-mandibulaire-une-observation-clinique-a-peripheral-osteoma-of-the-mandible-a-case-report/>.
- [16] Bengondo C, Mindja ED, Kenna E, Mengong H, Bengono G. Ostéomes Maxillo-Mandibulaires : Épidémiologie, Diagnostic, Classification et Thérapeutique au Centre Hospitalier et Universitaire de Yaounde (Cameroun). *HEALTH SCIENCES AND DISEASE* [Internet]. 2018 [cité 24 sept 2024]; 19(1). Disponible sur: <https://www.hsd-fmsb.org/index.php/hsd/article/view/997>.

