Scholars Journal of Medical Case Reports

OPEN ACCESS

Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

Peripheral Giant Osteoma of Mandible: Report of a Case and Review of the Literature

H. Loukili[1*], N. Ayad[1], B Boutakioute[1], M Ouali Idrissi[1], N Cherif Idrissi El Ganouni[1]

[1]Radiology Department, Er-razi Hospital, Mohammed VI University Hospital, FMPM, Cadi Ayyad University, Marrakech, Morocco

DOI: 10.36347/sjmcr.2021.v09i09.019 | **Received:** 16.08.2021 | **Accepted:** 21.09.2021 | **Published:** 24.09.2021

***Corresponding author:** H. Loukili

Abstract **Case Report**

Osteoma of the jaw bones is a rare entity with very few cases reported in the literature. Osteomas are benign, slow growing osteogenic tumors of the bone commonly encountered in the craniofacial skeleton and characterised by the proliferation of compact or cancellous bone. They can be central, peripheral or extra-skeletal in their location .The solitary periosteal osteomas of the jaw bones are quite rare. The mandible is more commonly affected than the maxilla, with the sites of predilection being the lingual aspect of the body, the angle and the inferior border. The diagnosis is based on the clinic, the radiological examinations. The CT scan is the best imaging modality as it provides exact details about the site, dimensions and extension of the lesion. Additional three-dimensional CT imaging helps planning the surgery. Confirmation of the diagnosis is pathological. Surgical management should be indicated both for cosmetic complaints and for diagnostic confirmation, especially in bulky lesions. We report a case of a Peripheral Giant Osteoma of Mandible in a 60-year-old man.

Keywords: Osteoma, Mandible, Peripheral, Case Report.

1. INTRODUCTION

Craniofacial osteomas are rare conditions, and few cases have been described in the literature [7]. An osteoma is a benign osteogenic tumor characterized by compact or cancellous bone proliferation. It may be classified as peripheral, central, or extraskeletal. A peripheral osteoma arises from the periosteum, a central osteoma from the endosteum, and an extraskeletal osteoma in the soft tissue [8]. It is affecting mainly young adults. A peripheral osteoma (PO) occurs most frequently in the paranasal sinuses. Other locations include the orbital wall, temporal bone, pterygoid processes and external ear canal and are rarely seen in the mandible [11]. As noted in previous reports in the literature, a solitary PO of the jaw bones is quite rare, involving the mandible more often than the maxilla. In the mandible, the most frequent locations are the angle and the condyle, followed by the mandibular body and the ascending ramus [7].

2. CASE REPORT

60-year-old patient, with no significant medical history, was admitted for management of a huge mandibular tumor evolving for 10 years. She had for 1 year a progressive limitation of the opening mouth, chewing disorders as well as respiratory discomfort. There was no notion of trauma or infection mandibular chronic. The extraoral examination revealed a huge swelling of the left hemiface, painless, of hard consistency, fixed to the deep planes, with a slight deviation of the midline of the chin to the healthy side. The intraoral examination was hampered by a limitation of the opening buccal through a finger, but he did not notice any abnormality the cheek mucosa, with poor dental condition.

Fig 1: Axial (A) and coronal (B) sections of the bone window of a cervico-facial CT scan: lesion of the left mandibular angle, dense and homogeneous bone matrix, with clear contours and lobulated, appended to the lower mandibular cortical which is thickened with condensation of the bone marrow opposite

Computed tomography of the facial mass in axial, coronal and sagital sections, bony and parenchymal windows, with and without injection of the contrast product, revealed a paraosteal process, of dense and homogeneous bone matrix, measuring approximately 86x67x70 mm, homogeneous with clear contours and lobulated, appended to the lower mandibular cortical which is thickened with condensation of the bone marrow opposite (Fig 1 and 2), arriving in contact of the alveolar canal which appears to be respected with no infiltration of the surrounding fat. He stretched out to the parties soft cheeks with moderate extrinsic compression of the oropharynx.

Tumor excision was performed. The pathological examination was in favor of a mandibular osteoma, without sign of malignancy. The postoperative follow-up was straightforward.

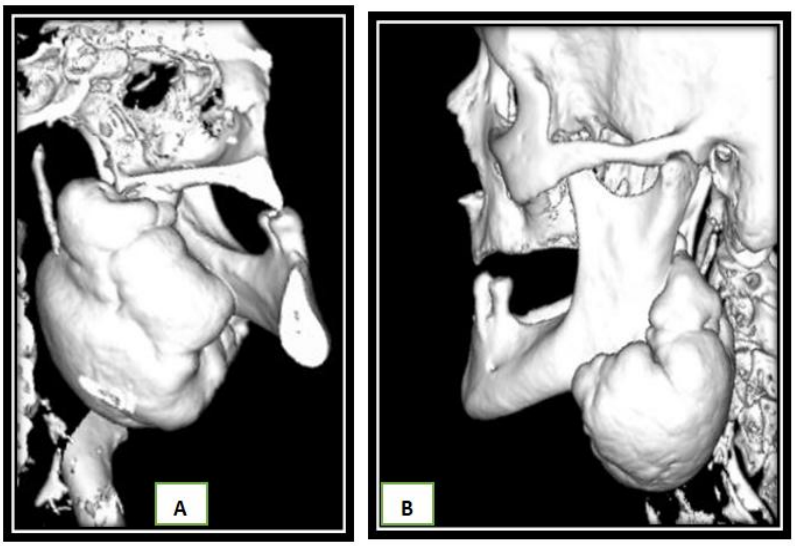

Figure 2: Medial (A) and Lateral (B) view of three-dimensional CT image shows a bony mass arising from the angle of left mandibular

3. DISCUSSION

Osteomas is a relatively rare osteogenic benign neoplasm which affects 0.43–1% of the population [6], characterized by the proliferation of either or both compact and cancellous bone [9] and composed essentially of osteoblastic connective tissue forming an abundant osteoid and new bone, which may eventually become compact over a period of time [5].

Giant osteoma of mandible is rare with only seven cases reported in the English literature. They occur most often in 5th and 6th decades of life with female predilection [6].

They are almost exclusively seen in craniofacial skeleton, of which frontal and paranasal sinuses are more commonly involved sites [9]. It may arise from periosteum (peripheral), endosteum (central) and even extraskeletal soft tissue. Peripheral osteoma affects mainly the frontal bone and mandible. Central cases are also seen in mandible more than maxilla but the proportion of the central maxillary lesion is slightly higher than peripheral maxillary lesions [6]. Osteomas can be sessile or pedunculated , and are found in the mandible angle, condyle, or molar body regions [7]. The pathogenesis of these osteomas is unclear. Several authors reported a clear history of traumatic events, but others did not relate them to a history of previous trauma or contributory medical factors [3].

As solitary peripheral osteoma may be clinically silent for years without symptoms, it is usually diagnosed when it becomes enlarged or is incidentally discovered by radiological examination such as panoramic radiography or CT [2]. It is depending on the location and size of the lesion [8]. 5% of cases which are larger than 3 cm become symptomatic and cause complication [6]. It may cause swelling, facial asymmetry, and functional impairment. The swelling is usually painless [8].

In our case, the lesion is single and silent and initially without any symptoms , however, it gradually enlarged over a period of 4 years to reach a size of 86x67x70 mm.

The presence of multiple lesions is generally related to Gardner's syndrome, an autosomal dominant inherited disease which associates, in addition to osteomas, rectocolic polyposis, dental abnormalities and dermatological lesions in the form of subcutaneous fibroids and epidermoid cysts. Thus, the observation of several peripheral osteomas should suggest this diagnosis and require a colonoscopy to search for a possible precancerous lesion [10].

Radiographic investigations such as occlusal radiograph, panoramic radiograph or Computed Tomography (CT) scan are used for imaging; however, the CT scan is the best imaging modality as it.

Provides exact details about the site, dimensions and extension of the lesion [1]. Additional three-dimensional CT imaging helps planning the surgery [2].

Peripheral osteomas, in most cases, are easy to recognize because of their classic radiographic findings. It is a classically well-circumscribed, round or oval, mushroom-like radiopaque mass with distinct borders.The lesion may be sessile and attached to the cortical plates with a broad base. If a peripheral osteoma is pedinculated, a narrow contact area can be seen between the lesion and the compact bone [8]. Similarly, in the present case, the computed tomography (CT) scan showed a well-circumscribed, radio-opaque mass with a broad base attached to the left angle of the mandible. The 3D reconstruction of the computed tomography image revealed a pedunculated homogeneous bony mass attached to the buccal cortex at the left angle of the mandible.

Peripheral osteoma should be differentiated from several pathologic entities, such as exostoses, osteoblastoma, and osteoid osteoma, late-stage central ossifying fibroma, or complex odontoma [8]. Exostoses are hamartomas in preference to occur at the lingual [torus mandibularis] and buccal regions of the mandible, midline of hard palate [torus palatinus], and buccal and palatal region of the maxilla [4]. Exostoses are osseous overgrowths that usually stop growing after puberty is attained, differentiating them from osteomas [1]. Central ossifying fibromas have well-defined borders and a thin, radiolucent line separating the lesion from the surrounding normal bone. Osteoblastomas and osteoid osteomas are most often painful and growth is rapid as compared to peripheral osteomas. A complex odontoma also presents as a well defined radiopacity within bone, but the density is greater than that of bone and resembles that of a tooth [1].

Confirmation of the diagnosis is pathological. Removal of an asymptomatic peripheral osteoma is not generally necessary [8]. Surgical management should be indicated both for cosmetic complaints and for diagnostic confirmation, especially in bulky lesions [7]. For mandibular localization, the intraoral route, if possible, is preferred to the external route in order to spare patients from possible lesions of the facial nerve [10].

Recurrences after surgical excision are extremely rare, and the malignant transformation has never been described in the literature [10].

4. CONCLUSION

Osteomas are slow growing asymptomatic masses seen predominantly in maxillofacial region. How-ever giant tumors can cause problems like dyspnea, dysphagia, and facial asymmetry depending on the site of tumor. CT is the best imaging modality for designing treatment plan. Even though the solitary peripheral osteomas are benign lesions, surgical excision is recommended. Though recurrence is not commonly reported, radiographic follow-up every 6 months for 2-3 years with annual radiographs thereafter is advised.

REFERENCES

1. Khandelwal, P., Dhupar, V., & Akkara, F. (2016). Unusually large peripheral osteoma of the mandible–a rare case report. *Journal of clinical and diagnostic research: JCDR*, *10*(11), ZD11-ZD12.

2. Kerckhaert, A., Wolvius, E., Van Der Wal, K., & Oosterhuis, J. W. (2005). A giant osteoma of the mandible: case report. *Journal of Cranio-Maxillofacial Surgery*, *33*(4), 282-285.
3. Carini, F., Longoni, S., Simone, M., Monai, D., Saggese, V., & Porcaro, G. (2014). Central osteoma of the maxilla: implant rehabilitation with immediate loading in fresh extraction socket. *Annali di stomatologia*, *5*(2 Suppl to No 2), 10.
4. Kshirsagar, K., Bhate, K., Pawar, V., SanthoshKumar, S. N., Kheur, S., & Dusane, S. (2015). Solitary peripheral osteoma of the angle of the mandible. *Case reports in dentistry*, *2015*.
5. Mehta, R., Yadav, A., Bansal, S. P., & Deshpande, M. D. (2014). Solitary Periosteal Osteoma of the Mandible: A case report. *Sultan Qaboos University Medical Journal*, *14*(1), e145-148.
6. Sadeghi, H. M., Shamloo, N., Taghavi, N., Safi, Y., Aghdashi, F., & Ismaeilnejad, M. (2015). Giant osteoma of mandible causing dyspnea: a rare case presentation and review of the literature. *Journal of maxillofacial and oral surgery*, *14*(3), 836-840.
7. Souza, P. D. D., Leonhardt, F. D., Ahumada, N. G., Abrahão, M., & Cervantes, O. (2015). Giant osteoma of the mandible☆. *Brazilian journal of otorhinolaryngology*, 81(1), 107-108.
8. Bulut, E., Acikgoz, A., Ozan, B., & Gunhan, O. (2010). Large peripheral osteoma of the mandible: a case report. *International journal of dentistry*, *2010*.
9. Nilesh, K., Bhujbal, R. B., & Nayak, A. G. (2016). Solitary central osteoma of mandible in a geriatric patient: Report and review. *Journal of clinical and experimental dentistry*, *8*(2), e219-222.
10. Benhammou, A., Boulaadas, M., Benbouzid, M. A., Boulaich, M., & Essakali, L. (2008). Ostéome mandibulaire géant (à propos d'un cas). *La Lettre d'oto-rhino-laryngologie et de chirurgie cervico-faciale*, (314), 10-11.
11. Manjunatha, B. S., Das, N., Sutariya, R., & Ahmed, T. (2013). Peripheral osteoma of the body of mandible. *Case Reports*, *2013*, bcr2013009857.