ECRONICON OPEN ACCESS

EC DENTAL SCIENCE
Case Report

TMJ Intracapsular Peripheral Osteoma: Case Report

Abdul Ilah Touleimat*

Professor, Department of Maxillo Facial Surgery, University of Pittsbugh Dental School, USA

***Corresponding Author**: Abdul Ilah Touleimat, Professor, Department of Maxillo Facial Surgery, University of Pittsbugh Dental School, USA.

Received: August 12, 2019; **Published:** October 24, 2019

Abstract

Osteomas are benign osteogenic tumors, arising in the craniofacial bones and rarely originating from the mandible. Asymptomatic in nature. It occurs predominantly in the second decade of life, with a tendency for malignant transformation by age. presents itself as a well defined radiopaque mass. Herein, we report a rare case of peripheral osteoma that was found inside the capsule of the temporomandibular joint, directly above and around the articulating fossa of a 26 years old male. Surgery with complete removal of the lesion is the most adequate treatment.

Keywords: *Benign; Mandible; Joint; Osteoma; Tumor; Capsule*

Introduction

Peripheral osteomas of the facial bones that are solitary in nature are benign osteogenic tumors characterized by proliferation of compact or cancellous bone. They are bosselated, round to oval, sessile, and originate from the craniomaxillofacial region such as temporal bones, sinuses, maxilla, or mandible. Although they can occur at any age, they are generally seen between 2nd and 5th decades of life [1,2].

Osteoma mostly is asymptomatic neoplasm, comprising of well differentiated matured bone. It is distinguished by multiplication of either compact or cancellous bone in an endosteal or periosteal location [3]. The central osteoma originates from the endosteum, the peripheral osteoma from the periosteum and the extra-skeletal soft tissue osteoma usually progress within the muscle. Peripheral osteoma of the jaw bones rarely occur [2,3]. They are more frequent in the craniofacial region, particularly the sinuses, primarily in the frontal sinus, followed by the ethmoidal and maxillary sinus [4,5].

Males and females are equally affected without predisposition for any age. Peripheral osteomas are slow growing and clinically asymptomatic. When they reach a large size, they can produce swelling and asymmetry [6].

I report a case of a solitary peripheral flat shaped osteoma arising at the temporal bone inside the TMJ capsule with its clinicopathological, radiological findings and its surgical treatment.

Case Report

A 26-year-old male patient reported to the Department of Oral and Maxillofacial surgery, School of Dentistry Damascus University, with a chief complaint of slow growing swelling anterior to her right ear. He noticed a small growth 3 years ago which grew in size gradually to reached the present size. No associated pain or limitation in mouth opening. On clinical examination, a swelling and elevation of the

normal looking skin measuring approximately 2.5 cm × 1.5 cm in dimension anterior to the right ear. On palpation, the swelling was bony hard in consistency, fixed to the underlying bone, no pain upon palpation. No change in color of the overlying skin. Mandibular movement was almost normal with incisal opening of 4 cm.

For farther study of the case, series of different radiographs were ordered.

A review to what we have got views. Panoramic x ray shows a 2.5 cm × 1.5 cm bony mass Partially covering the right condyle. With good amount of mouth opening (Figure 1).

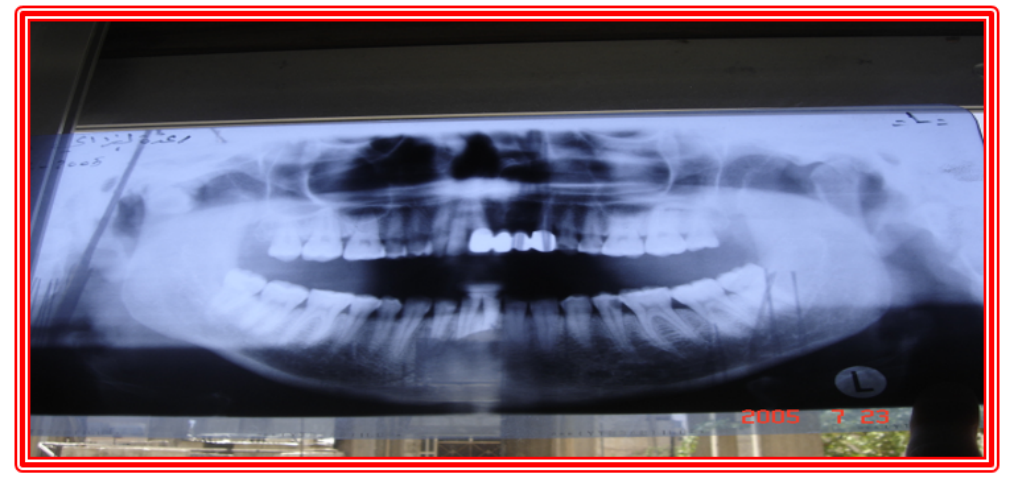

Figure 1: *Shows the bony mass and the clear mouth opening.*

CT scan view shows the size and the location of the mass, its relation to the temporal bone and the condyle (Figure 2).

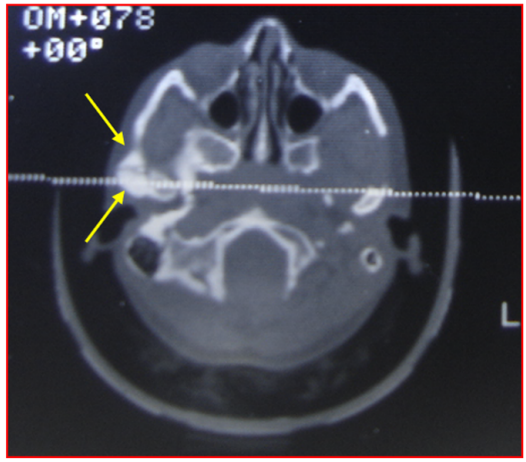

Figure 2

In a CT shot through both condyles:

- An optic mass covering the condyle extending downward in a direction close to the neck of the condyle.
- Clear border of the condyle same as in the other side. The condyle is free from the bony mass.

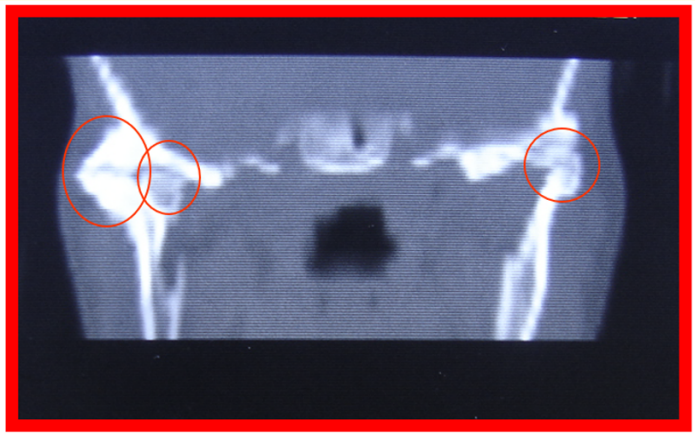

Figure 3: *Shows the mass and its relation with the adjacent condyle, and the R&L Condyles.*

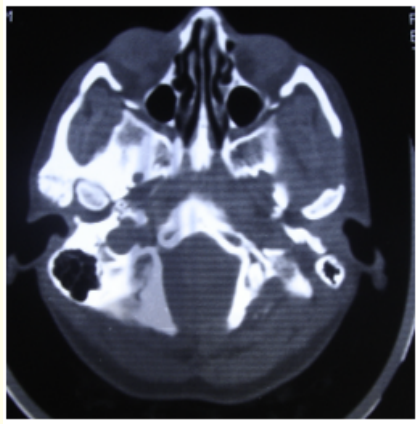

Figure 4: *Free condyle, No relation with the mass.*

TMJ Radiograph the mass locks as a cup surrounding the condyle in all directions. The Articulating eminence was free of the mass (Figure 5).

Surgery: The mass was removed through a classic TMJ surgical intervention, using the Laser hard rays.

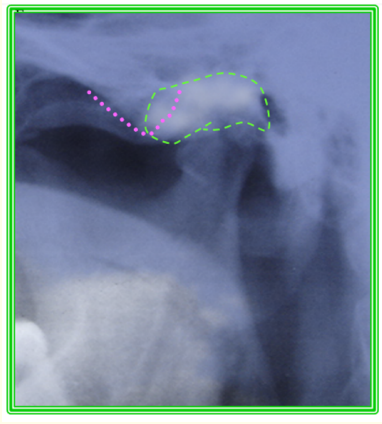

Figure 5: *Shows the Condyle and the mass.*

When the capsule was opened, we could see that the osteoma was covering the lateral surface of the Zygomatic arch and extending to surround the condyle (Figure 6-8).

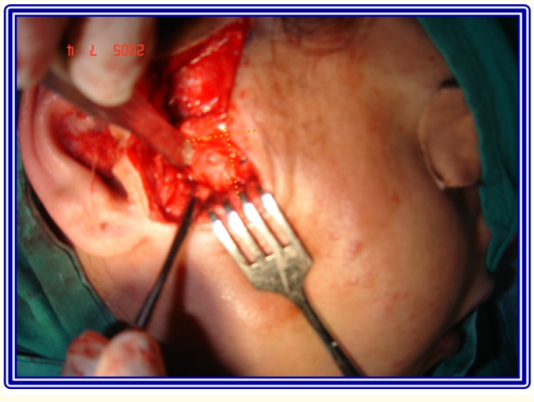

Figure 6: *Opening the capsule.*

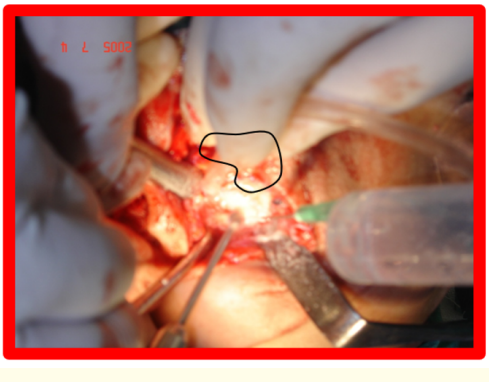

Figure 7: *The mass was covering the lateral surface of the Zygomatic arch and extending to surround the condyle.*

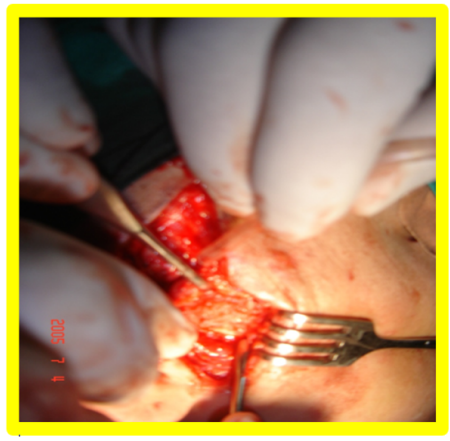

Figure 8: *A more clear view of the mass.*

After Partial removal of the mass. The condyle found to be free and could be pushed down with a retractor. all the joint elements, were normal and in good relation, free from the involvement, we could see and exam the articulating disk (Figure 9).

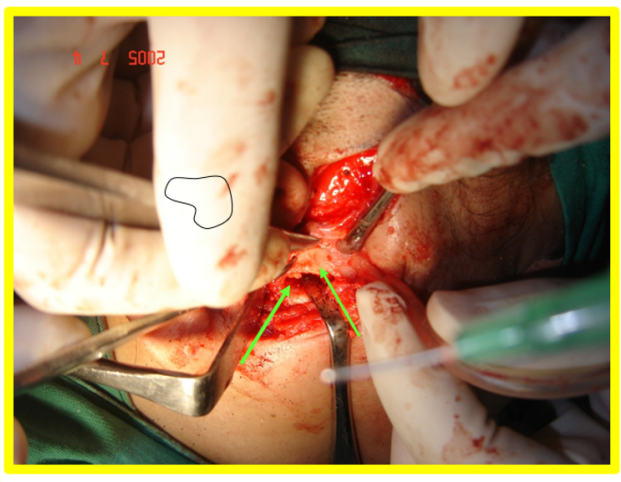

Figure 9: *All the joint elements were normal and in good relation and free from the involvement.*

The rest of the mass was removed by Lazier rays (Figure 10). Jaw movement was normal.

The capsule was stitched back, then to close the tissue and the skin. Post Op. exam three days and two weeks later, no complications, the jaw movement was free and normal.

Figure 10

Discussion

Peripheral osteomas are commonly located on the lower border or buccal aspect of the mandible, some investigators classified peripheral osteoma as a reactive condition triggered by trauma [7,8].

Majority cases of peripheral osteoma are asymptomatic. Often remain undetected unless incidentally found on a routine radiographic survey or until they cause facial asymmetry or functional impairment [9].

In most cases traditional radiographic imaging is sufficient to diagnose an osteoma. On radiographs, peripheral osteoma can be appreciated as a well defined, round or oval, dense radiopaque mass with distinct borders with a density indistinguishable to normal bone. If a peripheral osteoma is pedunculated, a narrow contact area can be seen between the lesion and the compact bone [10,11].

It is not always essential to remove an asymptomatic peripheral osteoma. Surgical intervention is advisable only if it becomes large enough to cause facial asymmetry and functional impairment [12].

Conclusion

Osteomas are slow-growing benign tumors with rare recurrence rate, and malignant transformation is very unusual. Proper radiographic investigations and good clinical knowledge is essential to achieve proper diagnosis of these lesions.

Surgery is indicated only when the lesion is symptomatic or if it becomes large enough to cause facial asymmetry.

Even the recurrence is very rare in such lesions, radiographic follow up should be done after surgical removal.

Bibliography

1. Iwai T., *et al*. "Peripheral osteoma of the mandibular notch: Report of a case". *Iranian Journal of Radiology* 10.2 (2013): 74-76.

2. Alves N., *et al*. "Peripheral osteoma in the ramus of mandible: Report of case". *International Journal of Odontostomatology* 5.3 (2011): 215-219.

3. Frolich MA. "Mandibular osteoma: A case of impossible rigid larynoscopy". *Anesthesiology* 92.1 (2000): 261-262.

4. Regezi JA and Sciubba J. "Oral Pathology". 2nd edition. Philadelphia PA: Saunders (1993): 407.

5. Junquere-Gutierrez L., *et al*. "Odontogenic tumors Classification. Clinical features diagnosis and treatment". *Medicina Oral Patologia Oral y Cirugia Bucal* 2.2 (1997): 94-101.

6. Lew D., *et al*. "Osteomas of the condyle associated with Gardners syndrome causing limited mandibular movement". *Journal of Oral and Maxillofacial Surgery* 57.8 (1999): 1004-1009.

7. Batsakis JG. "Tumors of the head and neck: Clinical and pathological consideration". 2nd edition. Baltimore, MD Williams and Wilkins (1979): 405-406.

8. Singhal P., *et al*. "Peripheral osteoma in a young patient: A marker for precancerous condition?" *Journal of Indian Society of Pedodontics and Preventive Dentistry* 30.1 (2012): 74-77.

9. Kaplan I., *et al*. "Peripheral osteoma of the mandible: A study of 10 new cases and analysis of the literature". *Journal of Oral and Maxillofacial Surgery* 52.5 (1994): 467-470.

10. Aghabeigi B., *et al*. "Simultaneous repair of an orbital floor fracture and removal of osteoma: case report and review of the literature". *International Journal of Oral and Maxillofacial Surgery* 32.1 (2003): 94-96.

11. Sayan NB., *et al*. "Peripheral osteoma of the oral and maxillofacial region a study of 35 new cases". *Journal of Oral and Maxillofacial Surgery* 60.11 (2002): 1299-1301.

12. Gupta KC., *et al*. "Peripheral osteoma of the maxilla report of an unusual case". *International Journal of Oral Care and Research* 2.4 (2014): 60-63.

Volume 18 Issue 11 November 2019