

Odontogenic myxoma of anterior mandible treated with enucleation and curettage: A case report

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ABSTRACT

Odontogenic myxoma is a rare intra-osseous benign odontogenic tumour of the jaw bone which may cause resorption of the cortical bone. In this paper, the author reports a case of odontogenic myxoma treated with enucleation and curettage in a 25-year young man who reported with a painless swelling in the chin region of the mandible. The Panoramic Radiograph, showed unilocular radiolucency extending from the left second premolar to the right second molar region of the mandible without disrupting the cortical bone. Considering the age of patient, asymptomatic nature of the disease and non-aggressive radiographic features, conservative management with enucleation and curettage was planned. During the post-operative follow up of 8 month, the patient was asymptomatic. Thus, conservative approach can be used in asymptomatic and non-aggressive cases odontogenic myxoma.

Key words: anterior mandible, asymptomatic, curettage, enucleation, odontogenic myxoma

Odontogenic myxoma is a rare, slow-growing, non-metastasizing tumour characterized by asymptomatic expansion of the jaw. The lesion is locally invasive, benign tumour derived from embryonic mesenchymal structures [1]. It was first described in 1947 by Thoma and Goldman [2] in the jaw and the term ‘myxoma’ was coined by Virchow in 1863 [3, 4]. It accounts for 3-6% of the odontogenic tumours, most commonly encountered in mandible more specifically in posterior mandible. Anterior mandible is rarely affected and the lesion seldom crosses the midline [3-5]. Radiographically, it appears as a well-defined unilocular or multilocular radiolucency with fine bone septa [1, 3-5]. Histologically, a hypocellular tumour comprising stellate and spindle-shaped cells lying loosely in an abundant myxoid stroma is noted [1, 6]. Treatment options ranging from enucleation, excision, or radical surgery with curettage of adjoining hard tissues have been reported in the literature. However, the best therapeutic option for

patients is still debatable. Here, we describe odontogenic myxoma that was treated by enucleation and curettage surgery and followed up for 8 months thereafter.

CASE REPORT

A 25-year-old male patient reported to the Department of Oral and Maxillofacial Surgery, with a chief complaint of painless swelling in the chin region of the mandible since 2 months which gradually enlarged in size. No relevant medical and dental history was given by the patient. On general physical examination, the patient was well oriented to the time, place, person, and all vitals were within the normal limits. On extra-oral local examination, remarkable facial asymmetry was noted. An oval shaped swelling of approximately 1 X 2 cm in diameter was present in the anterior region. Surface of the swelling was smooth, however on palpation, was hard in consistency (Figure 1). On intraoral examination, round to oval shaped swelling

with approximately 3 x 1.5 cm in size was seen involving the labial vestibule and obliterating it. The swelling was firm in consistency and grade 1 mobility of 31, 32, 41 and 42 were noticed. All teeth of the mandible were vital (Figure 2).



Figure 1: Preoperative image showing swelling in the chin region, Figure 2: Intraoral image showing displacement of anterior teeth

Panoramic Radiograph revealed a well-circumscribed unilocular elliptical radiolucency with sclerotic border extending from the mandibular left second premolar to the right second molar of mandibular body region with the displacement of anterior tooth roots (Figure 3).



Figure 3: Preoperative Orthopantomogram showing unilocular radiolucency and displacement of roots

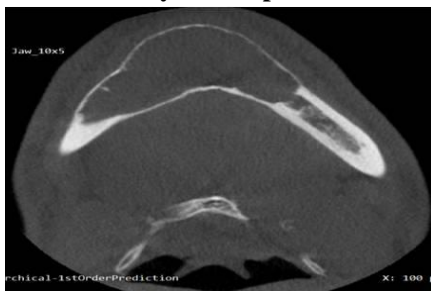


Figure 4: CBCT Axial view showing cortical expansion with intact cortical plates

CBCT images showed that the hypodensity present had well defined cortical border. Sagittal view demonstrated that there is an irregularity present at the root tip of 46 to 34, suggestive of external root resorption. Axial view demonstrated expansion and thinning of the buccal and lingual cortical plate (Figure 4). The radiographic feature

was suggestive of an aggressive neoplastic lesion. Incisional biopsy of the lesion was done for definitive diagnosis, which showed the presence of spindle-shaped cells in the loose myxoid stroma with delicate fibrils and dense collagen fibres suggestive of Odontogenic Myxoma.

Based on the provisional diagnosis, enucleation and curettage were decided as the treatment modality with an intention to preserve the periosteum and residual bone as much as possible to achieve uneventful hard tissue healing during follow-up. An intraoral crevicular incision was given from right to left first molar and tumour mass was exposed and removed, the teeth 45 to 34 were extracted. Curettage was done with a round diamond bur with copious cool irrigation to remove 1 to 2 mm of bone, preserving the mental nerves (Figure 5, 6).



Figure 5: Image showing enucleation of lesion



Figure 6: Image showing cortical bone after enucleation and curettage

After thorough irrigation, cavity was packed with iodoform roller gauze, dressing was given and closure was done with 3-0 vicryl suture. The wound was evaluated at an interval of every 7 days and iodoform dressing was changed till complete soft tissue healing. A panoramic radiograph was taken at immediate postoperative period (Figure 7), after 4 and 8 months. During 8 month follow-up, we observed uneventful secondary healing and bone regeneration, no mutilation and no sign of recurrence clinically and radiographically (Figure 8).



Figure 7: Immediate postoperative OPG, Figure 8: OPG after 8 months follow up shows considerable bone formation

DISCUSSION

Odontogenic myxoma is a rare, slow-growing, non-metastasizing tumour characterized by asymptomatic expansion of the jaw. It has a female predominance and is more common in 2nd and 3rd decade of life, is seldom seen below the age of 10 years and above 50 years [1, 5, 7]. Mandible is most commonly affected than maxilla with a ratio of 3:1. Larger lesions are often associated with a painless expansion of the involved bone. Displacement and mobility of teeth in the affected region is a relatively common finding [6]. Our patient reported with painless swelling in the anterior region of the mandible which gradually enlarged for 2 months, and resulted in loosening & displacement of teeth.

Radiographically, the presentation often is described as a honeycomb, soap-bubble, tennis-racket, or ground-glass pattern [1, 6, 7]. The size of the lesion is correlated with the locularity. Lesions >40 mm tend to be multilocular, and smaller lesion tends to be unilocular [1, 5]. The current case had a well-circumscribed unilocular elliptical radiolucency with sclerotic border present. In the present case, histologic sections revealed spindle-shaped to angular tumour cell with long anastomosing process scantily distributed in loose myxomatous stroma showing fibrillar intracellular material. Few small basement membrane line epithelial cell islands are also seen resembling rest of malassez, suggestive of Odontogenic myxoma.

In 25% of cases, odontogenic myxoma reoccurs, aggressive and invasive behavior of this tumor leads to high recurrence [1]. The main reason for recurrence is thought to be incomplete removal rather than the intrinsic biological behaviour of the tumor [8]. The recommended treatment for odontogenic myxoma depends on the lesion

size and can vary from enucleation or curettage to radical resection [1, 5]. Since the tumour is not radiosensitive and locally invasive, surgical resection is the common treatment modality chosen [4]. Complete surgical removal of the tumor by conservative treatment can be difficult because it is not encapsulated and myxomatous tissue infiltrates the surrounding bone [1, 8, 9,]. Although radical surgery appears to eradicate the tumour, it also causes significant functional and aesthetic disturbances [8, 9].

Alternatively, enucleation of the lesion and curettage of bone or normal tissue can be considered. Less invasive nature of surgery, intraoral approach, preservation of nerves and vital structures, improved esthetics with lesser hospital stay are few advantages [8]. Recent evidences suggest that a more conservative management may result in an acceptable recurrence rate, with less morbidity, if long-term follow-up is provided [6, 8]. Zanetti et al. emphasize on the conservative treatment involving enucleation of the lesion with a wide curettage of normal tissue or a generous amount of apparently uninvolved surrounding tissue, or even peripheral osteotomy, as this has the advantage of preserving vital structures and maintaining oral function [9]. It is also necessary to have a proper wound care postoperatively. Iodoform pack used in our case reduces the wound fluid by fibrinolytic activity, exhibits antimicrobial activity after topical application and covers the denuded bone surface to reduce pain [10].

CONCLUSION

Enucleation and curettage was performed keeping in mind the age of the patient and non- aggressive nature of the lesion as the cortical plates were intact. Other surgical procedures may have caused severe deformity postoperatively that adversely could have affected the

psychosocial condition of the patient, particularly at a young age. From our case it can be concluded that, a conservative approach can be an option to avoid facial and functional deformities in case of asymptomatic cases, because the recurrence does not always occur. A close follow up, however is mandatory to evaluate the possible recurrence.

REFERENCES

1. Higo M, Kasamatsu A, Ogawara K, et al. A case of a rapidly expanding odontogenic myxoma of the mandible. *Oral Science International*. 2015;12(1):22-6.
2. Thoma KH, Goldman HM. Central myxoma of the jaw. *Oral Surg Oral Med Oral Pathol*. 1947 Jul 1;33(7):B532-40.
3. Sangeetha KP, Bose TC, Balan A, et al. Odontogenic Myxoma –Report of a rare case, *IOSR Journal of Dental and Medical Sciences*. 2017;16(4):13-17.
4. Ramesh S, Govindraj P, Pachipalusu B. Odontogenic myxoma of posterior maxilla - A rare case report. *J Family Med Prim Care*. 2020;9(3):1744-1748.
5. Buch SA, Babu SG, Rao K, et al. A large and rapidly expanding odontogenic myxoma of the mandible. *J Oral Maxfac Radiol*. 2017;5(1):22-6.
6. Oliveira SV, Rocha AC, Cecchetti MM, et al. Odontogenic myxoma in a child treated with enucleation and curettage. *Autopsy & case reports*. 2018 Jul;8(3).
7. Mittal Y, Chugh A, Varghese KG, et al. Management of recurrent odontogenic myxoma of mandible: a clinical case report. *J Clin Diagn Res*. 2016;10(10):ZD30.
8. Sato H, Kurihara Y, Shiogama S, et al. Long-term follow-up after conservative surgical treatment of odontogenic myxoma: A case report and literature review. *Case Rep Dent*. 2019;2019:1634842.
9. Zanetti LS, de Carvalho BM, Garcia Jr IR, et al. Conservative treatment of odontogenic myxoma. *J Craniofac Surg*. 2011;22(5):1939-41.
10. Mizokami F, Murasawa Y, Furuta K, et al. Iodoform gauze removes necrotic tissue from pressure ulcer wounds by fibrinolytic activity. *Biol Pharm Bull*. 2012;35(7):1048-53.

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