

Odontogenic Myxoma: A Case Report**Ishank Singhal¹, Pradkshana Vijay², Nilesh Pardhe³, Harvey Thomas⁴, Harendra Singh⁵**

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ABSTRACT:

Odontogenic Myxomas are benign but locally aggressive tumors found exclusively in jaws and arise occasionally in other bones. We report a rare case of odontogenic myxoma occurring in mandible of 65 years old female with a brief review of pathogenesis, clinico- radiographic and histopathological features, and diagnostic dilemmas in managing the same.

Keywords: Benign odontogenic tumor, Invasion, Mandible, Surgical resection.

INTRODUCTION

Odontogenic Myxomas (OMs) are benign tumors originating from embryonic mesenchymal elements of dental anlage. WHO classifies OM as benign tumor of ectomesenchymal origin with or without odontogenic epithelium.¹ Most cases present in third to fourth decade of life with marked female predilection. These are slow growing, painless and locally aggressive tumors. Larger lesions lead to tooth displacement, and expansion of cortical bone.² Radiographic appearance varies from unilocular to multilocular radiolucency with diffuse or well defined margins with fine bony trabeculae in the interior structure which gives a tennis racket or soap bubble or honey combed pattern. OM produce extracellular ground substance and thin fibrils by spindle shaped cells. Depending on the pattern of differentiation, histological nature of tumor varies from completely myxomatous to varying fraction of fibrous and myxomatous tissue.³ Treatment of choice is surgical excision by enucleation, curettage or block resection. In view of its rarity, large lesion involving body and ramus of mandible in a 65 years old female is reported.

CASE REPORT

A 60 years old female patient reported with chief complaint of swelling on the left side of the mandible since last 2 years. Swelling appeared 2 years back in left lower jaw after tooth extraction. Swelling was initially small & gradual in onset. It increased to the present size & gradually started extending below the left side of the mandible.

Extraoral inspectory findings revealed a solitary well defined swelling on left side of mandible, around 5x3cm in size, extending anteroposteriorly from the midline till the angle of the mandible, & from the lower border of the mandible superiorly to 3 cm short of supraclavicular ridge inferiorly. (Figure 1)



Figure 1: extraoral finding reveals swelling in the left side of mandible extending to the neck

Swelling was non tender, firm in consistency, with smooth & regular margins with no signs

of induration. It was mobile & was not attached with the underlying structure. Intraoral findings revealed a solitary swelling measuring 4x3 cm in size with smooth & well defined margins on left mandibular alveolar ridge extending from midline till retromolar area anterioposteriorly & left side of floor of mouth till left buccal vestibule.(Figure 2) Swelling was non tender & painless, firm in consistency, non fluctuant. Hard Tissue Examination revealed 24 which was impinging on the swelling leading to discomfort and ulceration of the swelling.



Figure 2: lesion on the left alveolar ridge extending till retromolar area

Radiographic findings using OPG revealed multilocular radiolucency present extending from left body to ramus region of mandible with erosion of lower border of the left mandible.(Figure 3) CT scan showed a large well defined heterogeneous attenuated soft tissue density, lesion of size approx. 47x38x41mm seen in left mandibular alveolar region with erosion of underlying mandibular ramus, cortical breach out and intermedullary extension.(Figure 4)

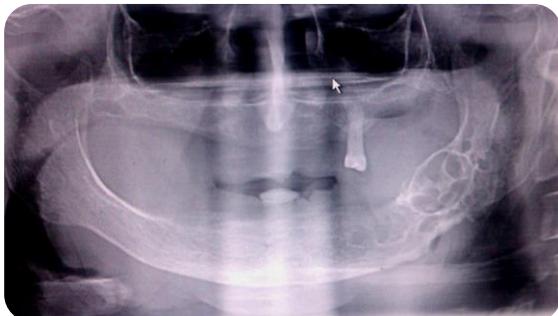


Figure 3: OPG reveals multilocular radiolucency extending from left body to ramus region of mandible with erosion of lower border of the left mandible

FNAC was done which showed a thick gelatinous fluid. Loose myxoid stroma with few inflammatory cells were seen

microscopically. Finally, a diagnostic biopsy was made. Five soft tissue pieces were received one measuring 2x2 cm, other three 0.5x0.5cm, grayish white in colour, jelly like consistency, irregular shape. One soft tissue was firm in consistency and appeared to be surface epithelium. Histopathological examination showed loose myxoid stroma having angular or stellate cells with loose strands of collagen fibrils and scattered epithelial rests were found. Blood vessels showed thin outer layer of hyalinization. Based on the above histopathological features diagnosis of odontogenic myxoma was made. (Figure 5)

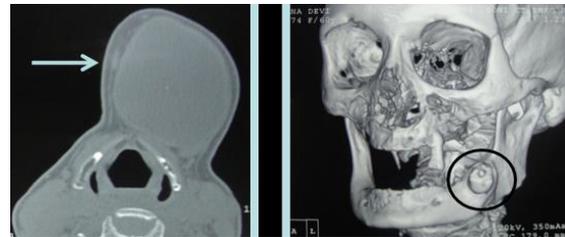


Figure 4: CT scan reveals well defined heterogeneous attenuated soft tissue density in left mandibular alveolar region with erosion of underlying mandibular ramus, and cortical breach out.

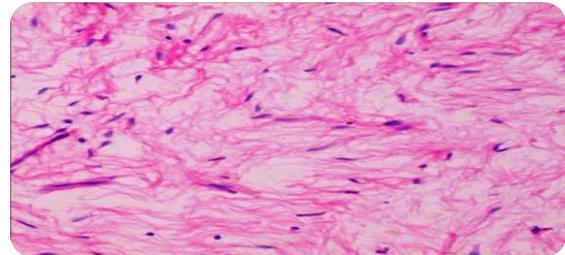


Figure 5: photomicrograph reveals loose myxoid stroma with angular or stellate cells with scattered epithelial rests

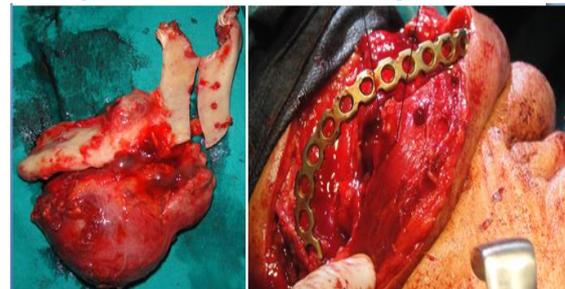


Figure 6: surgical resection of mandible with reconstruction plate

Surgical excision of the lesion with mandibular resection was done followed by mandibular reconstruction using reconstruction plate.(Figure 6) Post operatively, margins were clear and the patient recovered well. She maintained oral

competence without microstomia and or speech defect.(Figure 7)



Figure 7: post operative photograph of the patient

DISCUSSION

Myxomas were described by Virchow in 1871. Odontogenic myxoma is locally aggressive, nonencapsulated, nonmetastasizing neoplasm that infiltrates bone marrow spaces. Prevalence of OM is reported between 0.04 to 3.7%. OM's are seen and is rarely seen in patients younger than 10 years or older than 50 years. [4] Present case was reported in a female aged 65 years which is quite rare in occurrence. Mandible is affected frequently compared to maxilla. Our case was presented in posterior mandible, which is in conformity with reported literature. No clinical or radiographic finding is present that can distinguish myxoma from other odontogenic or non odontogenic lesions: histologically many lesions can be misinterpreted as odontogenic myxoma. Mostly OM are asymptomatic, some cases present with pain when invading surrounding structures. OM appears radiographically as multilocular or unilocular radiolucencies.³ The present case showed multilocular radiolucency with soap bubble appearance. Histologically, tumor appears bland and consists of loosely arranged, evenly dispersed, spindle shaped, round and stellate shaped cells with a lightly eosinophilic cytoplasm in a mucoid rich intercellular substance. The cytoplasmic processes are long and anastomosing with each other throughout the mass. The nuclei are hyperchromatic and ovoid. Histopathological

differential diagnosis includes developing dental follicle, myxolipoma, myxoid liposarcoma, myxoid fibrosarcoma, chondromyxoid fibrosarcoma.^{5,6}

Histochemical studies done on mucoid material reveal the presence of hyaluronic acid and this plays a significant role in neoplastic behavior of tumor. IHC studies have shown reactivity of lesional cells to vimentin and MSA.^{2,6}

Treatment varies from local excision, curettage or enucleation to radical resection. Prognosis is usually good, but recurrence has been reported in few cases. With adequate surgical excision, long term survival is anticipated.⁷

CONCLUSION

Odontogenic myxoma is a rare benign odontogenic tumour representing 3% of odontogenic tumours. Due to the rarity of these tumours, in addition to the lack of ultrasructural studies concerning the nature of the tumour, controversies exist among histopathologists concerning the histogenesis of odontogenic myxomas as osteogenic or odontogenic, hence, emphasizing the need for extensive studies on this slow growing but destructive lesion.

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