

# Odontogenic Myxoma of Mandible: Report of A Rare Case

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A 43-year-old male patient reported to the Department of Oral Medicine & Radiology with the chief complaint of swelling on left mandibular anterior region since 2 years. Swelling had gradually increased to attain the present size, and was completely asymptomatic. His medical history was non-contributory; however he gave history of extraction of lower left tooth 2 years back.

Extra-oral examination revealed an ovoid, hard swelling in the left anterior mandible, extending to the posterior region. The swelling had a smooth surface and indistinct borders [Table/Fig-1a]. It extended mesio-laterally from the mandibular midline to approximately 1.5 cm distal to the corner of the mouth and supero-inferiorly from lower lip till the lower border of the mandible. Another hard swelling was palpable inferior to the angle of the mandible, which was speculated to be an enlarged lymph node [Table/Fig-1b]. Intra-oral examination revealed an ovoid, firm to hard non-tender swelling with diffuse borders and smooth surface. It extended mesio-distally from mandibular right lateral incisor region to left premolar region. The vestibular space was obliterated and mandibular left first and second premolars were missing [Table/Fig-1c]. Provisional diagnosis of a benign odontogenic tumour of left mandibular region was given.

Patient was advised Panoramic Radiograph and mandibular cross-sectional radiographs. Panoramic radiograph revealed a multilocular radiolucent lesion in the body of the mandible with partially defined irregular borders. Lesion extended from mesial root of mandibular first molar on left side till mandibular first premolar on the right side [Table/Fig-2a]. It also showed fine, lacy trabeculation as well as angular septae at various sites giving rise to different geometric forms and largely a soap bubble appearance.

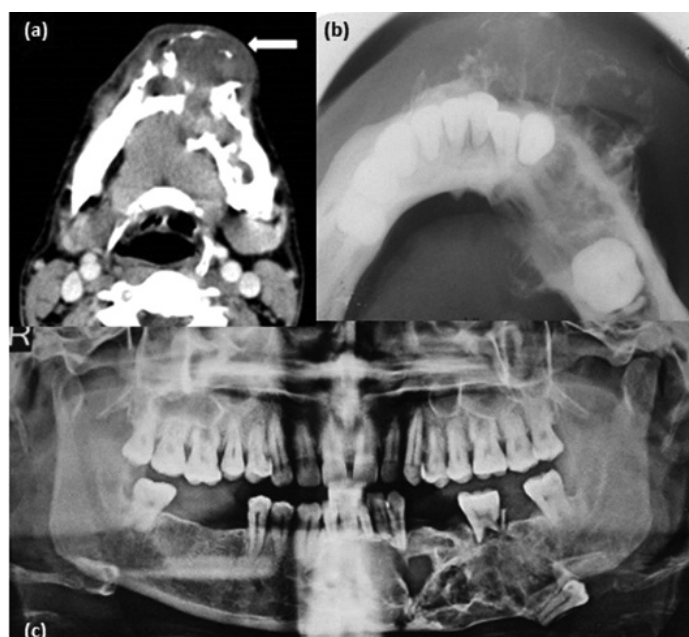
External root resorption was evident with the mandibular left first molar, and both right and left central and lateral incisors as well as canines. Interestingly displacement of mandibular left premolar to the lower border of the mandible was observed which explained the presence of the small swelling in the lower border of left side of mandible. In mandibular cross-sectional view, lesion showed perforation of both labial and lingual cortical plate with the typical angular septae, exhibiting a radiographic hair bush like appearance [Table/Fig-2b].

Computed Tomography image (axial image) showed hypoattenuated mass in the mandible extending from left ramus to right parasymphiseal region [Table/Fig-2c]. Expansion and perforation of both lingual and buccal cortical plates were evident. Irregular destruction of the medullary bone was evident in the region giving it a multilocular appearance with few angular septae. The radiographic features were suggestive of an aggressive neoplastic lesion.

At this point, clinical and radiographic features were suggestive of a locally invasive benign odontogenic tumour. Differential diagnosis for the same included central giant cell granuloma, odontogenic myxoma and ameloblastoma. Central giant cell granuloma (CGCG) generally occurs in mandibular region anterior to second molars, and gives a typical soap bubble like appearance. Odontogenic myxoma (OM) may predominantly occur in mandibular premolar, molar or ramus regions, giving varied radiographic appearance such as honeycomb, soap-bubble or tennis racket appearance.



**[Table/Fig-1a-c]:** (a,b) Clinical images revealing the extra-oral swelling in the left mandibular anterior region; and (c) intra-oral swelling extending from mandibular right lateral incisor region to left premolar region; causing vestibular obliteration

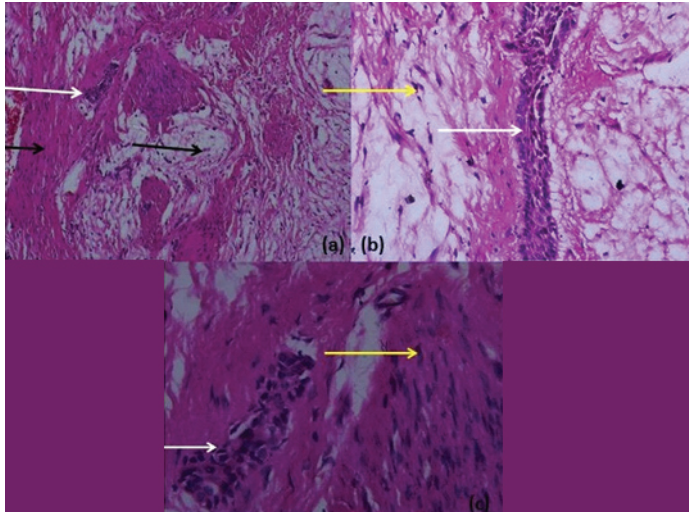


**[Table/Fig-2a-c]:** Radiographic images: CT axial view: a) Mandibular true occlusal; b) Panoramic radiograph; c) revealing the presence of an aggressive multilocular lesion extending from mandibular right premolar to left molar region, causing buccal and lingual cortical plate expansion along with bony destruction

Around 70% of ameloblastomas occur in mandibular posterior region, but rarely crosses the midline.

To investigate further, incisional biopsy of the lesion was done, followed by histopathological evaluation. Histopathological investigation included H&E staining which showed presence of spindle shaped cells in loose myxoid stroma with delicate fibrils and dense collagen fibers. It also showed inactive looking odontogenic rests [Table/Fig-3a-c].

Based on the clinical, radiographic and histopathological features a final diagnosis of Odontogenic myxoma was made.



**[Table/Fig-3a-c]:** Histopathologic images: H&E stained sections (10X (a), 10X with low power magnification (b) & 40X (c)) showing spindle shaped cells (yellow arrow) in loose myxoid stroma with delicate fibrils (black arrow), dense collagen fibers, and odontogenic rests (white arrow)

Odontogenic myxoma is a rare tumour of jaw which was first reported by Thoma and Goldman in 1947 [1]. It presents as a slow growing and locally invasive lesion of the jaw; predominantly mandible, and generally occurs during second to fourth decade of life. It is usually asymptomatic in its early stage and gets discovered only during routine radiographic examination. In later stages, it may cause as painless expansion of the jaw and perforation of the cortical plates [2].

Radiographically, odontogenic myxoma may present as a unilocular or multilocular radiolucency with a honeycomb, soap bubble or "tennis racket" appearance [3].

Computed tomography (CT) and Magnetic Resonance Imaging (MRI) images sometimes may correlate with the histological presentation of these lesions in terms of their internal structure and condition of the bone margins. Hence, they may be considered as useful diagnostic tool for the same [4].

Differential diagnosis of odontogenic myxomas includes other benign tumours like ameloblastoma, ameloblastic fibroma, odontogenic fibroma, central haemangioma and odontogenic keratocyst amongst the cystic lesions. Generally the diagnosis is based on the radiologic and histopathologic features [3].

Histopathologically odontogenic myxomas are characterized by embedding of stellate and spindle-shaped cells in a richly myxoid extracellular matrix. Collagen is usually present scarcely, however higher amounts of collagen may be present in some cases. These lesions are termed as myxofibroma [5].

Management for myxomas depends upon the extension of the lesion. However, considering the non-capsulated nature of the tumour and tendency to infiltrate locally, aggressive surgical enucleation is advisable. Small lesions may be managed by curettage but diligent follow up must be maintained in such cases. In the cases of extensive lesions when facial disfigurement is a concern, simple enucleation and curettage of fibrous lesions is recommended [5]. Recurrences are common in cases of odontogenic myxoma with a reported rate of 25% in the treated cases. This may be attributed to the tendency of odontogenic myxoma to spill into the surrounding marrow spaces [3]. Despite of reports of local recurrences, the prognosis of odontogenic myxomas is fair.

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