Odontogenic Myxomas with an Unusual Presentation in the Anterior Mandible: A Case Report
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ABSTRACT
Odontogenic myxoma (OM) is a rare and locally invasive benign neoplasm derived from the odontogenic ectomesenchyme, found exclusively in the jaws. As a myxoma, this tumour consists mainly of spindle-shaped cells and scattered collagen fibers distributed through a loose, mucoid material. The lesion is found in age groups ranging from 10–50 years but commonly diagnosed in young adults (25–35 years). The lesion often grows without symptoms and presents as a painless swelling. It has variable radiographic presentation but often causing root displacement and resorption. In this article we present a rare case report of swelling in anterior mandible in a 31-year-old-male, diagnosed histopathologically as odontogenic myxoma.

Keywords: Odontogenic myxoma, Ectomesenchyme, Spindle cells odontogenic tumours, Muciod stroma

INTRODUCTION
Odontogenic myxoma in the jaws is infrequent, accounting for only 3–6% of odontogenic tumours[1]. Generally, odontogenic myxoma is not encapsulated and tends to infiltrate the surrounding bone trabecular space. Rudolph Virchow, a German pathologist was probably the first to describe the histologic features of myxofibroma in 1863, although the lesions of jaws were not particularly mentioned. In 1947, Thoma and Goldman first described myxomas of the jaws. Since then odontogenic myxoma has been a subject of continuous scientific debate[1].

World Health Organization (WHO) classified this tumour as benign ectomesenchymal tumour with or without odontogenic epithelium arising from the dental papilla, follicle or periodontal ligament[2]. The myxomas of jaws are considered as odontogenic origin because of its exclusive site in tooth bearing areas of jaw; usually associated with missing teeth and resembling odontogenic mesenchyme with presence of sporadic islands of odontogenic epithelium. Most of the odontogenic myxomas are present in young individuals with second and third decade of life and have slightly more female predilection. It is commonly located intraosseously but its presence in soft tissue is also noted as a peripheral variant. Odontogenic myxomas of bone are more common in mandible than in maxilla. Clinically, it appears as asymptomatic, slowly enlarging swelling resulting in facial asymmetry. Lesions may enlarge to cause cortical plate expansion and displacement of tooth[2–3].

Radiograph represents as multilocular radiolucency giving rise to soap bubble or honey comb appearance while some cases may report with unilocular radiolucent lesion. Tough tooth displacement is commonly present root resorption is less frequent and scalloping is observed between the roots[4–5].

Histopathologically, it is composed of loosely arranged

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spindle-shaped, stellate or angular cells in a mucoid intercellular substance. It is less cellular with no significant cellular activity as pleomorphism or mitoses. A variable number of small vessels may intersperse within the stroma. Small islands or nests of odontogenic epithelium may be found infrequently. The treatment for OM includes local surgical excision, curettage or radical resection[2, 3, 6, 7].

Due to its rare presentation, a case of OM of mandible in male patient is reported discussed along with the histopathological features.

CASE REPORT

A 31-year-old male patient reported to Department of Oral & Maxillofacial Pathology, with swelling in lower anterior region of jaw which gradually increased to attain present size over a period of 8 months.

Clinical examination

It was a single, small, painless swelling present in lower anterior region extending from 41 to 43 measuring 2 × 3 cm in dimensions with smooth surface and diffused borders almost obliterating the labial vestibule (Figure 1). Overlying mucosa was normal in colour. Displacement of teeth was evident. On palpation, it was firm, non-tender, immovable swelling with expansion of labial and lingual cortical plates. There was no relevant medical and family history.

Imaging examination

On Panoramic radiograph, a well-defined unilocular radiolucent lesion was seen extending from 33 to 43 region. The lesion showed sclerotic borders with scalloping around the roots. 31, 32, 33 showed marked displacement without root resorption (Figure 2a).

Cone beam computed tomography (CBCT) revealed a unilocular radiolucent lesion measuring 4 × 2 × 2.5 cm with expansion of both labial and lingual cortical plates. There was displacement of teeth but no root resorption (Figure 2b).

Histopathological findings

On gross examination, the biopsy specimen appeared as firm, lobulated gelatinous unencapsulated mass.
The cut surface was glistening, mucinous and white-gray in colour. Microscopic examination revealed loosely arranged spindle-shaped cell with long fibrillar processes which were intermeshing with each other in a loose myxoid stroma (Figure 3a). Only few collagen fibrils were noticed. Some areas showed small islands of odontogenic epithelium (Figure 3b). These features were suggestive of odontogenic myxoma.

**DISCUSSION**

Odontogenic myxoma is a benign, unencapsulated tumour of jaw bone which accounts for almost 3–6% of all odontogenic tumours. It has locally aggressive behavior. According to Farman et al., the mean age of occurrence ranges between 20 to 40 years and slightly more female predilection in a ratio of 1:1.16. Its more common location is posterior mandible than maxilla; also other areas like anterior mandible must be taken in consideration[8, 9, 10]. Our case reported at the age of 31 years and lesion in the mandible with expansion of cortical plates. Most commonly odontogenic myxoma represents as slow growing, asymptomatic swelling. By the time patient noticed the lesion tumour grow to achieve a considerable size because of absence of pain, parasthesia or displacement of teeth. Our case reported with similar findings as slow onset of tumour with any symptom. Radiographically, the tumour shows varied nature from unilocular radiolucencies to multilocular radiolucency. The most common presentation includes a multilocular radiolucency with ‘soap bubble’ or ‘honey comb appearance’. A unilocular appearance is commonly seen in children[1, 4, 5, 11]. The present case showed unilocular radiolucent lesion with a well-defined margin. There is no root resorption by the tumour and radiolucency scalloped between roots. Differential diagnosis, such as ameloblastoma, central giant cell granuloma, odontogenic fibroma, must be ruled out by clinical and radiographic presentation.

On histopathology, odontogenic myxomas characteristically present as abundant loosely arranged mucoid stroma with rounded, spindle-shaped, or angular cells. It is relatively acellular and avascular. Cellular and nuclear pleomorphism, mitotic activity may not be present. Remnants of odontogenic epithelium in the form of small islands have been occasionally noted. Our case has spindle-shaped cell with long fibrillar processes in mucoid ground substance. There is no cellular and nuclear pleomorphism. Areas of small odontogenic epithelial islands were evident confirming the diagnosis as odontogenic myxomas.

The aggressive nature of odontogenic tumour has been well-documented in the available literature. The tumour is not sensitive to X-Ray radiation hence the treatment of choice is surgical removal. Surgical opinion varied...
for this lesion considering it as a slow growing, infiltrative, and aggressive neoplasm. Recurrence is considered to be less in case of wide local excisions where as conservative management accounts for more recurrences. In present case wide surgical excision was done and patient is followed[2, 3, 12, 13].

REFERENCES