

Fibromyxoma of Mandible: A Case Report

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ABSTRACT

Fibromyxoma of mandible is a rare mesenchymal soft tissue benign neoplasm with an uncertain line of differentiation. The head and neck region involvement is uncommon, with only few cases reported. One additional case of odontogenic fibromyxoma is reported here, including a literature review of intraoral reported cases. A 8-year-old male child patient presented a painful swelling over right mandibular region since 8 days extending from distal of permanent first molar to the retromolar area, involving the buccal and lingual cortex, measuring nearly 2x1.5 cm in maximum diameter. Based on the histopathological report, the patient underwent a wide local excision under general anesthesia. No recurrence has been detected after 9 months of follow-up.

Keywords: Mesenchymal, Swelling, Enucleation, Fibromyxoma, Surgical excision

INTRODUCTION

Term myxoma was described by Rudolph Virchow in 1863 to describe abdominal fat and soft tissue lesion [1]. However, gnathic myxoma in 1947 was described by Thoma and Goldmann as “a rare benign tumor of the tooth-bearing areas of the jaw bone” [2]. Odontogenic fibromyxoma (also called odontogenic myxofibroma) is a relatively rare neoplasm and accounts for only 3-8% of all odontogenic tumors and cysts of the jaws [3]. This lesion is a benign tumor of mesenchymal origin that may contain odontogenic epithelium. The clinical presentation is varied, although the majority of patients with odontogenic fibromyxomas present with a painless swelling [4]. However, patients may be symptomatic and may present with malocclusion, and loose or impacted tooth. In severe cases, patients may present with parasthesia of the mandibular nerve [5]. Although the origin of a myxoma is still obscure, an origination from the dental follicle seems to be the most reasonable explanation. This article describes a case of fibromyxoma of mandible in a child of 8 years, with clinical features, histopathology and surgical management.

CASE REPORT

A 8 year old child reported to Bharati Dental College and Hospital with history of painful swelling over right mandibular region since 8 days (**Figure 1**). On examination an intraoral swelling (2 x 1.5cm) was noted over right mandibular alveolar region extending from distal of permanent first molar to the retromolar area, involving the buccal and lingual cortex & was mixed red and white in color. On palpation, the lesion was soft, smooth surfaced and

tender. Incisional biopsy was taken from the lesion under local anesthesia and histopathology report revealed a fibromyxomatous proliferation. Patient was also advised for OPG.

Based on the histopathological report (**Figure 2**), the patient underwent a wide local excision under general anesthesia and the specimen was subjected to histopathological examination. The size of the lesion had increased to 4x3x2 cm and had become exophytic in nature (**Figure 3**), meaning that the lesion had undergone some changes after incisional biopsy which prompted to be an aggressive lesion. On histopathological examination of the excisional biopsy specimen, the section showed tissue lined by stratified squamous epithelium, and the subepithelium showed nodules of proliferating cells. Individual cells are spindle shaped with vesicular nuclei, clear to eosinophilic cytoplasm. Background showed fibromyxoid stroma. Mild increase in mitotic activity seen. Few bony spicules & normal salivary gland also noted. The overall picture was suggestive of “reparative fibromyxoid proliferation”.

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Figure 1. X-Ray of Mandibular region.

**BHARATI VIDYAPEETH DEEMED TO BE UNIVERSITY
DENTAL COLLEGE & HOSPITAL, PUNE**

Department Of Oral & Maxillofacial Pathology & Oral Microbiology

Name: Darshan Taware	Case No:- 1071812
Age & Sex: 8yrs/M	Biopsy No: H-124-21
Refd by: Dr Halli	Type of Biopsy: Incisional
Dept.: OMFS	Biopsy site: lower right posterior region
Reporting Date: 12-11-2021	Received Date: 8-11-2021

GROSS PATHOLOGY

2 large pieces of soft tissue specimen was received. Specimens measured (1.4x1x0.9) cm & (1.5x0.5x0.5) cm. The specimens were soft to firm in consistency, brownish white in colour, with regular border and irregular surface.

HISTOPATHOLOGY REPORT

The given H & E section shows epithelium and connective tissue.
The epithelium shows hyperplastic stratified squamous with ulcerations being exhibited over large areas.
The ulcer is covered with thick fibrinous exudates beneath which granulation tissue is seen.

The underlying connective tissue stroma consists of dense collagen fibers interspersed with proliferating fibroblasts showing varied morphology. The stroma shows fibrillar appearance with fibromyxoid stroma indicating extracellular matrix composed of immature collagen and fibroblasts separating and surrounding the cells. Abundant amount of chronic inflammatory infiltrate are present showing lymphocytes, plasma cells, histiocytes and macrophages. Dilated and engorged blood vessels are observed with endothelial proliferation and extravasation of RBC's.

The overall picture is suggestive of –

“Reparative fibromyxoid proliferation collaborating with the radiographic interpretation of pulpectomy in lower right D adjacent to 46” (Diagnosis based on representative area sent)

N.B – 2nd opinion taken from Dr Karandhikar [Professor, Dept of General Pathology, BVDU Medical College and Hospital]

Excisional biopsy report recommended.

12/11/21, 12.05 PM
 Signature of In-charge Faculty Signature of HOD

Figure 2. Histopathological report.



Figure 3. Pre-operative.

Wide local excision of lesion was done (**Figure 4**) followed by closure with vicryl 3-0 (**Figure 5**). The patient showed no signs of recurrence in 10 months follow up.

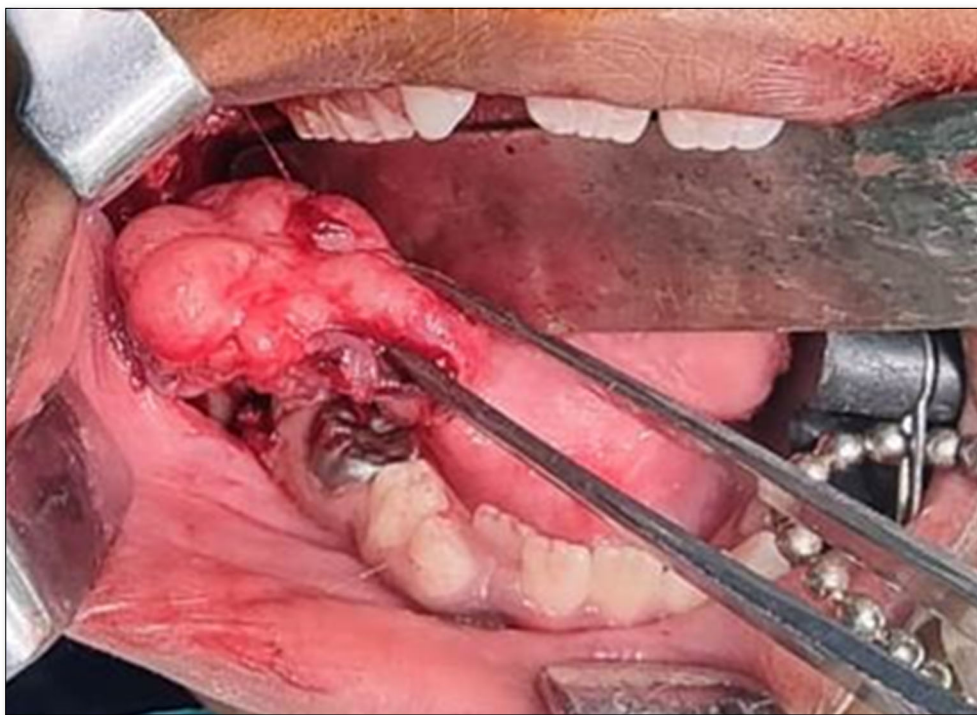


Figure 4. Intra-operative.

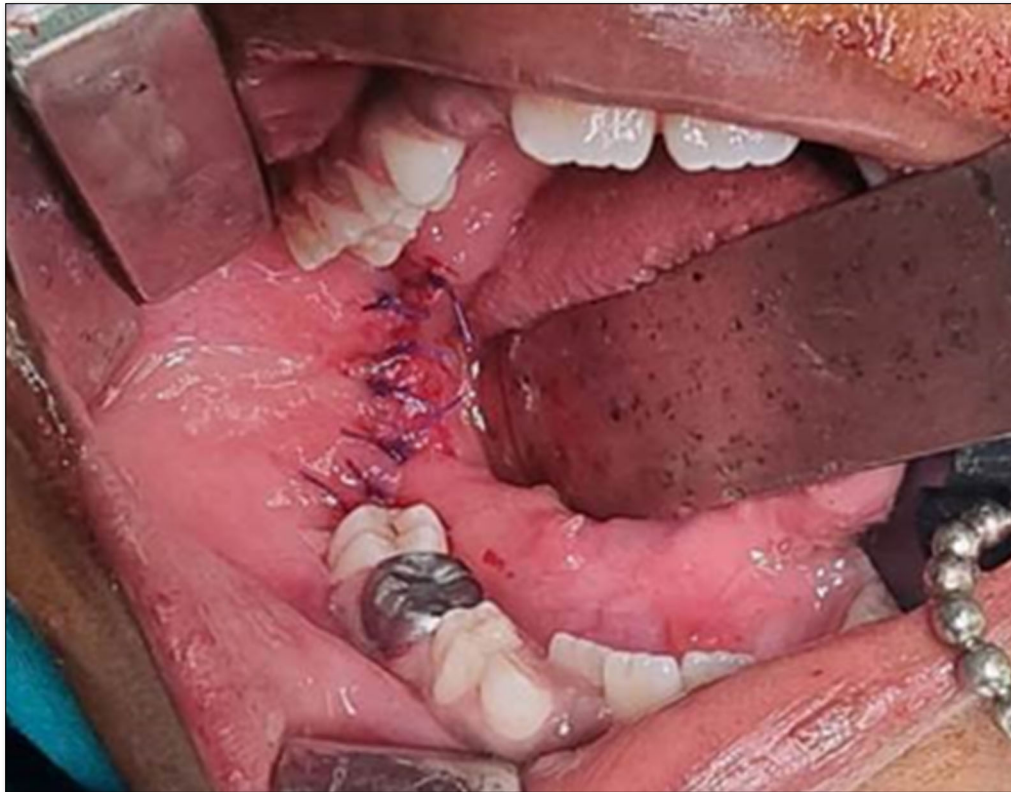


Figure 5. Post-operative.

DISCUSSION

While there are no universally accepted treatment recommendations for the management of fibromyxoma, it is important to consider the aggressive nature of this neoplasm in patient management decisions. Although the recommended treatment is usually surgical excision, approaches differ depending on the size of tumor and include conservative surgical excision, enucleation and curettage, curettage with and without electrical or chemical cautery, en bloc resection and wide resection with and without bone grafting. Recurrence rates between 25% and as high as 43% are reported for gnathic fibromyxomas [6]. This is strongly related to the nature of the lesion, presenting without a sheath, thus making the complete removal difficult. In some studies, a high rate of recurrence is documented after conservative therapy. This is attributed to the incomplete removal of the lesion rather than the intrinsic biological behavior of the lesion [7]. Due to the tumor's local aggressive biological behavior and high potential for recurrence, wide surgical resection is recommended. Radiotherapy is generally agreed to be ineffective in the treatment of fibromyxoma [8].

Myxomas/fibromyxomas are usually located intraorally most often in the posterior regions of the mandible, its angle and ramus and rarely extraorally [9]. The maxilla and anterior region of the mandible are rarely affected. The lesion can be

diffused or well defined, uni- or multilocular. It is characterized by a mucous or gelatinous grayish-white tissue that replaces the spongy bone and displaces the cortical plates of the jaws. Root displacement and resorption may be present. It may refer to hard and also to soft tissues.

Previous theories stress that the lesion derives from the neural sheath or is the result of degeneration of fibromas, lipomas and so forth, due to the chronic irritation and the degenerative processes following tissue anoxemia. Recent studies advocate that myxomas/fibromyxomas arise from the mesenchymatous tissue of the dental follicle, thus being described as odontogenic with fibroblasts playing the major role in cell dispersal [10]. This explanation fails to describe soft tissue myxomas. They probably arise from supportive structures of the teeth like the gingiva and the periodontal ligament.

CONCLUSION

In conclusion, fibromyxoma is a rare neoplasm. The radiological examination by means of CT and MRI plays an important role in the diagnosis of a fibromyxoma and in the differential diagnosis from other pathological entities such as the ameloblastoma. Its management is surgical and ranges from enucleation and curettage to complete resection and peripheral osteotomy according to its size. Patients must be monitored for at least two years postoperatively in order to diagnose possible recurrence.

CONFLICT OF INTEREST

There is no conflict of interest.

ACKNOWLEDGEMENT

All authors have viewed and agreed to the submission.

PATIENT CONSENT

Patient consent has been obtained for photograph.

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