Fibro Sarcoma of the Gingiva: A Rare Presentation.

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Abstract

Fibrosarcoma is a rare malignant mesenchymal neoplasm's of the fibroblasts which are represents 1% of all malignancies in the head and neck region. In this article we described a case of primary fibrosarcoma of the gingiva in right sided alvulas of the mandible in 16 years old male. Who was presented with a rapidly growing painful lump. Microscopically the tumor mass was composed with atypical proliferation of spindle cells arranged in intersecting fascicles and sterioform pattern. In immunohistochemically the cells showed immuno-reactivity for SAM, while negativity towards the others markers. On the basis of clinical histological and immunohistochemistry our case was diagnosed as a low grade primary fibrosarcoma of gingiva. We performed radical resection with wide margin as a primary treatment of choice without neck dissection. After primary treatment there is no signs of recurrence and metastasis was observed last 3 years follow up.

Keywords: Fibrosarcoma Gingiva, Oral cavity, Mandible. Histopathology; Immunohistochemistry

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Introduction

Fibrosarcoma is a rare malignant mesenchymal tumor of the fibroblast. About 5–10% of fibrosarcoma arise in the head and neck region[1]. In head and neck region oral fibrosarcoma primarily involve the maxillary sinus and the maxillary or mandibular bone, rarely affects the oral cavity proper. Fibrosarcoma of mandible is rare, with an incidence which ranges from 0-6.1% of all primary fibrosarcoma of the bone.[1,2,3,4] The aetiologic factors are still remains unknown, but it has been associated with several conditions such as Paget's disease, fibrous dysplasia, chronic osteomyelitis and post rediotherapy.[3] Clinically oral fibrosarcoma presents with pain, rapidly swelling, paresthesia, loosening of the teeth and ulceration of the overlying mucosa.[3,5,6] Radical surgery seems to be the best treatment option to fibrosarcoma. Radiation and chemo therapy has been used as adjuvant treatment.[7] We are present a rare case of intra oral gingival low grade primary fibrosarcoma in the lower alveolar tissue of a 16-years old male. Primary treatment was done by surgical resection with a wide margin.

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Case Report

A 16-years-old man presented with a rapidly growing painful swelling last one and half month over the right sided attached gingiva of the body of the mandible. A well- defined nodular type lesion of (2.5×1.5×1.3) cm^3 in diameter, free from overlying structure but fixed with underlying structure with a normal overlying mucosa was noted on local examination and . On palpation the mass was firm in consistency and painful in nature. [Figure-1, 2]. Radiological examination (OPG) reveled no osteolytic involvement in the body of the mandible.

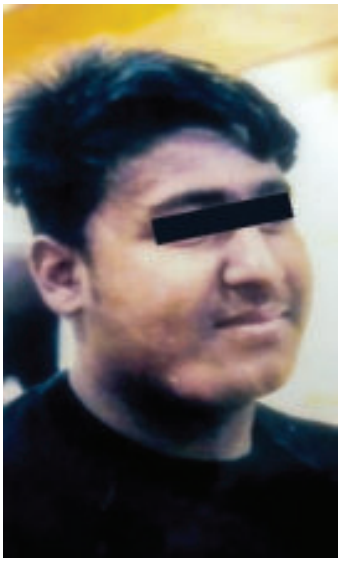

Fig-1: *Examination of the extra oral revealed a nodular, well-defined, lesion of (2.5×1.5) cm^2 in diameter with normal overlying skin.*

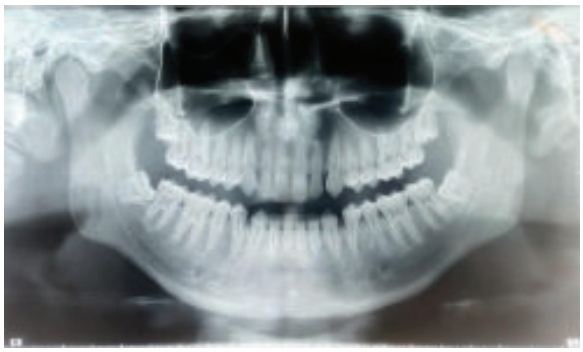

Fig-2: *Radiographic slide of normal OPG without involving underlying Mandible.*

Under local anesthesia Aspiration cytology was done. Microscopically, the tumor mass composed of atypical proliferation of spindle cells arranged in intersecting fascicles and storiform pattern. Oval to plump nuclei present and moderate eosinophilic cytoplasm contain. Mild degree of cellular and nuclear pleomorphism with mitoses can be seen. [Figure-3].

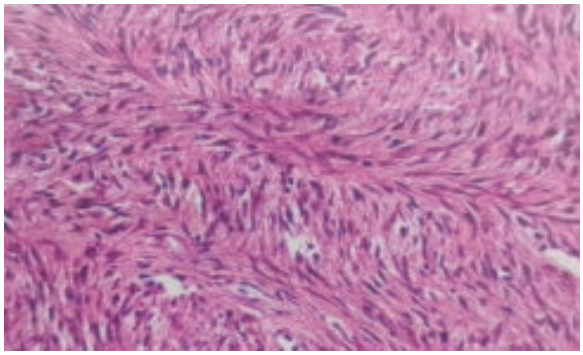

Fig-3: *Fine-needle aspiration cytology of the mass showed a loosely cohesive population of interlacing fascicles of spindle-shaped cells with elongated, blunt-ended nuclei and eosinophilic cytoplasm. Mitoses, both typical and atypical, and scattered necrotic foci were present. Hematoxylin and eosin staining, magnification = 40 ×.*

Histopathologically our case was diagnosed as a low grade fibrosarcoma. The tumor was excised completely with wide margin without neck dissection. After resection specimen was fixed by formalin-fixation and paraffin embedded. The sections was examined. Immunohistochemically the cells showed immunoreactivity only for SAM positivity. Negativity towards the S- 100 protein, cytokeratin cocktail, HMB-45, desmin, and epithelial membrane antigen (EMA) [Figure-4]. Our patient survived and there were no signs of recurrence regular three years follow-up [Figure-5, 6]. Without any metastasis and pulmonary involvement

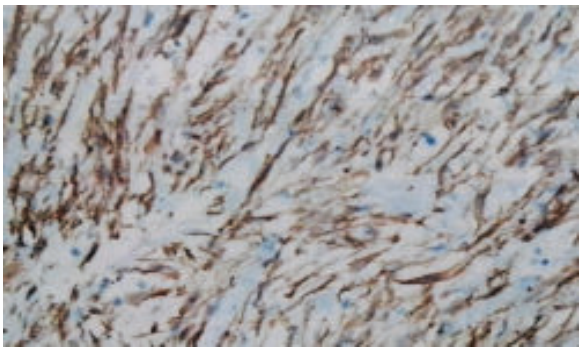

Fig-4: *Diffuse cytoplasmic SAM immunoreactivity was demonstrated in the tumor cells. SAM immunostaining, magnification = 40 ×.*

Fig-5: *Follow up picture (After 3years of Surgery)*

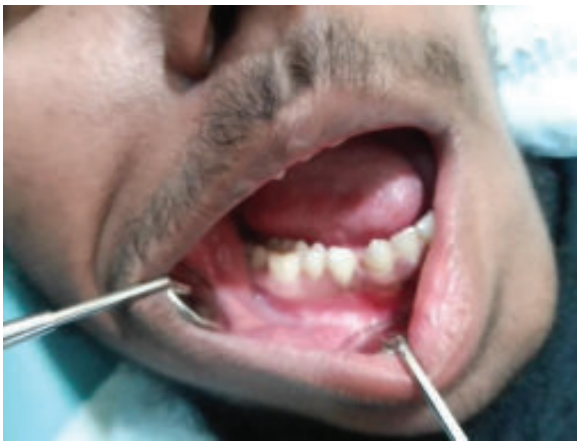

Fig-6: *Intra oral examination shows normal mucosal*

Discussion

Fibrosarcoma is a malignant mesenchymal tumor of fibroblast it represents 1% of all malignant tumors in the oral and maxillofacial region.[1-5] Mandible is the primary foci of the intraosseous form of fibrosarcoma in the head and neck region.[4] Periosteal pattern is differentiated from the intraosseous fibrosarcoma.[8] We reported a periosteal types of case. The periosteal pattern shows a better prognosis and overall 5-year survival rate is 75%.[9] The WHO reports an overall ten-year survival of low and high-grade sarcoma of the bone is 83.0% and 34.0% respectively.[8,9] The predominant mean age group of the fibrosarcoma is second to sixth decades of life, with equal gender predilection.[10]

Our patient present with a rapidly swelling mass associated with pain and paresthesia over the right sided body of mandible.[4,5,11] Radiological examination (OPG) reveled no osteolytic involvement in the body of the mandible. But Radiological imaging of intraosseous fibrosarcoma reveals radiolucent lesions with a geographical moth-eaten pattern bone destruction.[9,10,12]

Microscopically our case present with a classical composition of pleomorphic spindle cells arranged as a bands or interweaving fascicles with variable collagen with mild anaplastic change. There is no calcification was seen, this are the identical features of fibrosarcoma, which differentiate from others malignancies such as chondrosarcomas and osteosarcomas.[10,13]

Fibrosarcomas are graded from low to high malignancy after the FNCLCC grading system, according to the number of mitotic figures, tumor differentiation and the presence of tumour-necrosis.[10,14,15] Accordingly FNCLCC grading system our case is low grade fibrosarcoma of soft tissue.

Prognosis is directly related to histological grade, tumor size and adequate surgical treatment with margins free.[8] Surgical resection with wide margin are shows a good prognosis in low grade tumors.[16]Adjuvant radiotherapy and/or chemotherapy is still controversial in fibrosarcomas, but used in large inoperable cases or as a palliative treatment.[6,13,17] The high-grade tumors presents microscopic metastases and recurrence needed adjuvant therapy.[10,18] The prophylactic neck dissection is also still now controversial and not nessaserry in all cases.[4,13,19] We are not performed any neck dissections. Our case was treated by surgical resection with a wide margin without neck dissection. After 3 years of primary surgical resection the patient is survive shows no sign of recurrence and also pulmonary finding shows no growth or metastasis.

Conclusion

Intraoral soft tissue fibrosarcomas are uncommon presentation. Accurate diagnosis are depended with clinical, Radiological and histological findings. Still now controversy remain regarding the ideal treatment approach especially with the management of low grade intra oral fibrosarcoma. Surgical treatment plays an important role in intra oral fibrosarcoma. The benefit of this approach remain to be proven for long disease free survival and also avoid to tumor recurrence.

Consent Section

Written informed consent was obtain from patient for publication of this case report according to his images. A copy of written consent is available in Editor in chief of Journal.

Disclosure

The authors declared no conflicts of interest.

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