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Case report

Ameloblastic fibrosarcoma of mandible–A case report

Hyandavi Balla [a,*], Divya Uppala [a], Sumit Majumdar [a], Siva Kalyan Utharavalli [b]

[a] Department of Oral Pathology & Microbiology, India
[b] Department of Oral and Maxillofacial Surgery, India

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ABSTRACT

Ameloblastic fibrosarcoma (AFS) is considered as a rare malignant neoplasm composed of benign, odontogenic ameloblastomatous epithelium and malignant ectomesenchyme. It predominantly occurs in the posterior mandible with age ranging from 3 to 83 years. Pain and swelling are the most commonly associated clinical symptoms. The purpose of this report is to present a case of 16-year-old male patient who presented with an extra oral swelling in posterior mandible region which was later proven histopathologically as AFS.

Introduction

Ameloblastic fibrosarcoma (AFS) is a malignant odontogenic tumor composed of a benign epithelium and a malignant mesenchymal component [1]. It is defined as "a neoplasm with a similar structure to the Ameloblastic Fibroma, but in which the mesodermal component shows features of sarcoma [2]. AFS may arise denovo or may develop by malignant transformation of innocuous Ameloblastic fibroma [3–5]. Clinically, patients present with the chief complaint of pain and swelling. It presents in a wide age range of 3–83 years [3]. In this article, we are presenting the case of AFS that developed from pre-existing Ameloblastic Fibroma.

Case report

A 16-year-old male patient visited the out patient department with a chief complaint of swelling in the lower right back tooth region since 4 months (Fig. 1A and B). His past dental history revealed that a swelling was observed in the same region one-and-half year back, which was histopathologically diagnosed as Ameloblastic Fibroma. The patient presented with facial asymmetry with the lesion extending anteroposteriorly from the corner of the mouth to 2 cm ahead of tragus of the ear and superoinferiorly from 1 cm below the ala-tragal line to inferior border of the mandible. Right submandibular lymph node was firm and palpable with slight tenderness. Intraorally, a well defined, solitary swelling is seen in the lower right back tooth region extending anteroposteriorly from distal aspect of 44 to the distal aspect of 47 involving the retro molar area, mesiodistally extending 0.5 cm on either side. The swelling was roughly oval in shape; colour of the mucosa is similar to the normal adjacent mucosa. His panoramic radiograph revealed multilocular radiolucency extending anteroposteriorly from distal surface of 42 to the body and ramus of mandible (Fig. 2A). 3-Dimensional Computer Tomography scan depicted a homogenous soft tissue mass in the lingual aspect of the mandible with perforations in the cortical plate (Fig. 2B). Incisional biopsy was taken under local anesthesia (Fig. 3), Microscopic examination revealed epithelium arranged in the form of small islands, cords and strands in a background of hypercellular connective tissue stroma (Fig. 4A and B). Epithelial islands showed columnar cells at the periphery and stellate reticulum like cells in the centre and the surrounding ectomesenchyme shows hypercellularity with numerous plump fibroblasts with open-faced nuclei (Fig. 4C). The ectomesenchymal cells exhibit scanty cytoplasm, hyperchromatism, and nuclear and cellular pleomorphism, open phased nuclei, increased number of nucleoli and bizarre mitotic figures. (Fig. 4D and E). The diagnosis of AFS was made based on the above features. Hemimandibulectomy was performed on the patient. Patient is under follow up at regular intervals for 6 months.

☆ AsianAOMS: Asian Association of Oral and Maxillofacial Surgeons; ASOMP: Asian Society of Oral and Maxillofacial Pathology; JSOP: Japanese Society of Oral Pathology; JSOMS: Japanese Society of Oral and Maxillofacial Surgeons; JSOM: Japanese Society of Oral Medicine; JAMI: Japanese Academy of Maxillofacial Implants.

* Corresponding author.
E-mail addresses: hyandaviballa@gmail.com (H. Balla), uppala.divya@gmail.com (D. Uppala), drsumitmajumdar1971@gmail.com (S. Majumdar), sivkalyan@gmail.com (S.K. Utharavalli).

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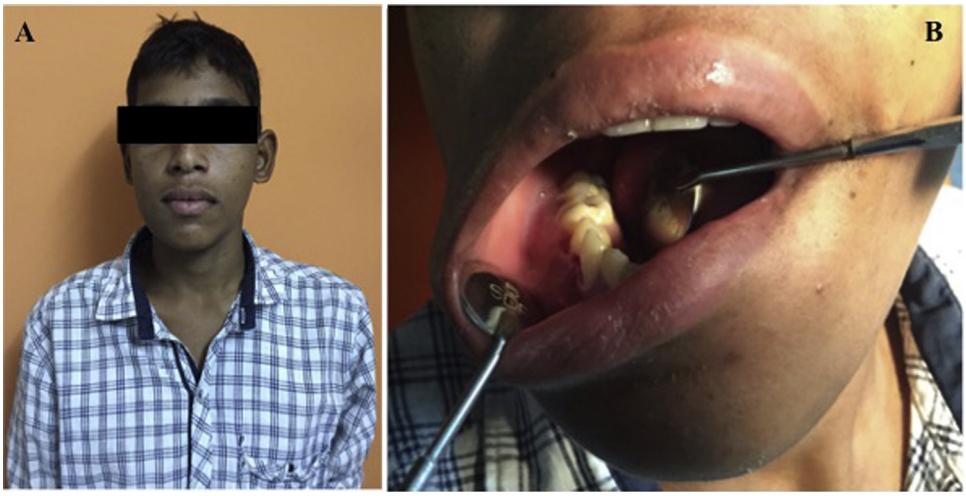

Fig. 1. A) Extraoral B) Intraoral.

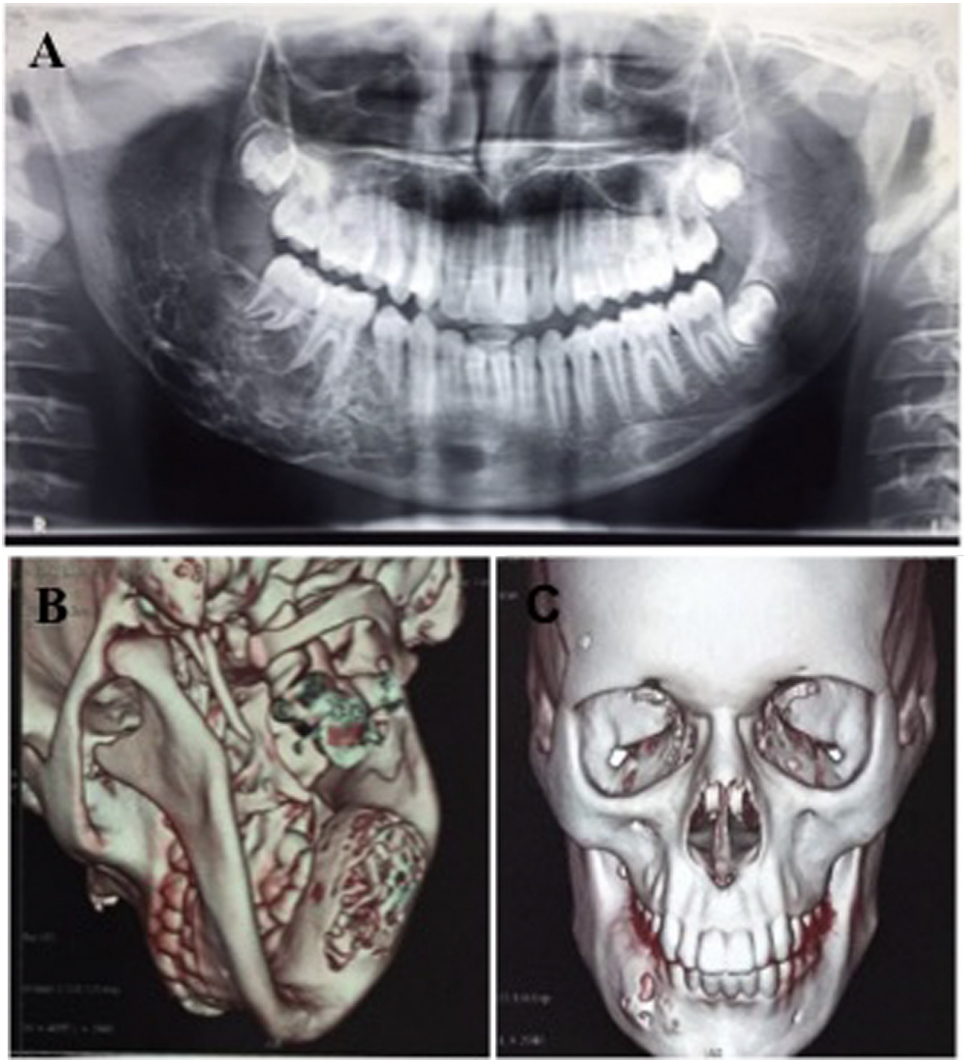

Fig. 2. A) Multilocular radiolucency in right mandible. B & C) Homogenous soft tissue mass with perforation of cortical plates.

Discussion

AFS is a rare malignant odontogenic tumor [4]. Heath published the first report of an AFS in 1887 where he described it as a 'spindle-celled sarcoma' of the mandible. The mean age of presentation ranges from 15 to 22 years and mandible is most commonly affected site [3,6,9,10]. Slight male predilection was noted [3]. Pain and swelling are the most common findings. Ulceration and pares-

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