



Odontogenic fibroma in a six-year old child presenting as trismus

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Abstract:

Odontogenic fibroma is a rare tumour of odontogenic mesenchymal origin, which accounts for only 0.1% of all odontogenic tumours and can be seen either in maxilla or mandible. Though it is seen in second and third decade of life, cases have been reported in the age range of 5-80 years. Trismus is a rare clinical presentation of this tumour. As there is seldom any malignant change or recurrence, the treatment of choice is surgical enucleation. Here, we present a case of odontogenic fibroma in a 6-year old child, who presented with trismus as a chief complaint.

Key words: Odontogenic fibroma, trismus, orthopantomogram

Introduction:

Odontogenic fibroma is a rare benign odontogenic tumour which is derived from mesenchymal tissue. It is one of the most ill-defined and least understood of all odontogenic tumours.¹ It accounts for around 0.1% of all odontogenic tumours.² It presents as an asymptomatic swelling causing cortical plate expansion in maxilla or the mandible³⁻¹¹ and is evenly seen in either of jaws.^{8,12} The usual presentation in the mandible is in the molar ramus region, whereas in the maxilla it is seen in the anterior region.^{4,8,13} The lesion is derived from the mesenchymal odontogenic tissue.^{4,6,8,13-15} It presents radiologically as a uni or a multi-locular radiolucency with well defined borders and in rare cases, it presents as mixed radiolucent and radioopaque features with undefined borders.^{8,13} Root resorption and displacement of teeth are rarely seen in this lesion.^{4,16} Odontogenic fibroma has no tendency to undergo malignant transformation and responds well for surgical enucleation.^{3,7} Any tumour seen in the region of the coronoid process may present with trismus and may need coronoidectomy to achieve optimal mouth opening apart from complete enucleation

of the tumour. We present a case of odontogenic fibroma of left ramus region presenting predominantly with trismus.

Case report:

A 6-year old male patient reported to us with a complaint of inability to open the mouth widely since 2 years. There was no history of trauma or forceps delivery. The patient gives history of pain on the left side of the lower jaw on attempting wide opening. On examination, the mouth opening was 11 mm with restricted lateral jaw movement. The condylar movements were palpable on both the planes. Intraorally, tenderness and mild cortical expansion was noted on the lateral ramus region on the left side. No other relevant dental findings were seen. Orthopantomogram showed an ill-defined radiolucency extending from the follicular space of lower left second molar tooth bud upto the coronoid process (**Figure I**). The condylar and coronoid processes appeared normal. Contrast enhanced computed tomogram showed a well marginated osteolytic lesion involving the left mandibular ramus adjacent to the tooth bud of 2nd molar measuring 1.5cm x 2 cm. Cortical discontinuity was noted on the

lingual side, all features suggestive of a cystic lesion (**Figure II, Figure III**) The condyles, coronoid and the temporomandibular joints were normal.

A tentative diagnosis of odontogenic cyst or tumour was established and owing to the age of the patient and size of the lesion, an excisional biopsy was planned along with a coronoidectomy to improve the mouth opening if required.

Intra-operatively, after muscle relaxation for general anaesthesia, there was no significant improvement in mouth

opening. Enucleation of the lesion was done along with removal of the unerupted tooth bud of the lower second molar. During enucleation, the lingual cortex was seen to be eroded. The bony bed was subjected to peripheral ostectomy and treated with freshly prepared Carnoy's solution. Coronoidectomy of the left side was performed to achieve a 33 mm mouth opening. The patient recovered uneventfully and was on jaw opening physiotherapy for the next few months.

Figure I: Orthopantomogram showing multi-locular radiolucency in the left ramus of mandible



Figure II: CT showing perforation of lingual cortex

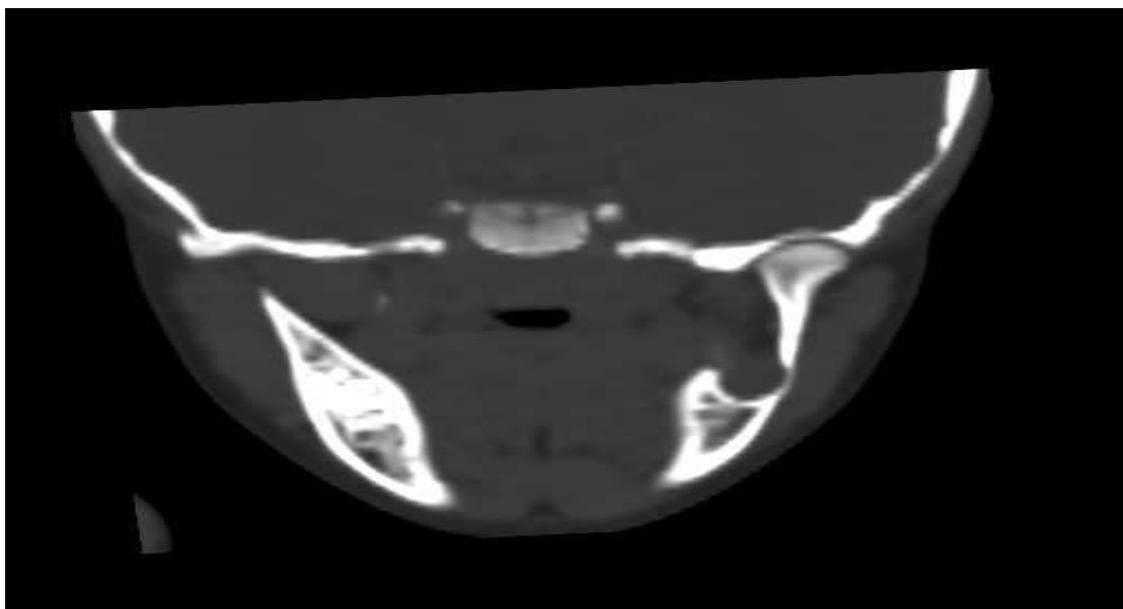


Figure III: 3D reconstruction showing thinning of buccal cortex in the ramus

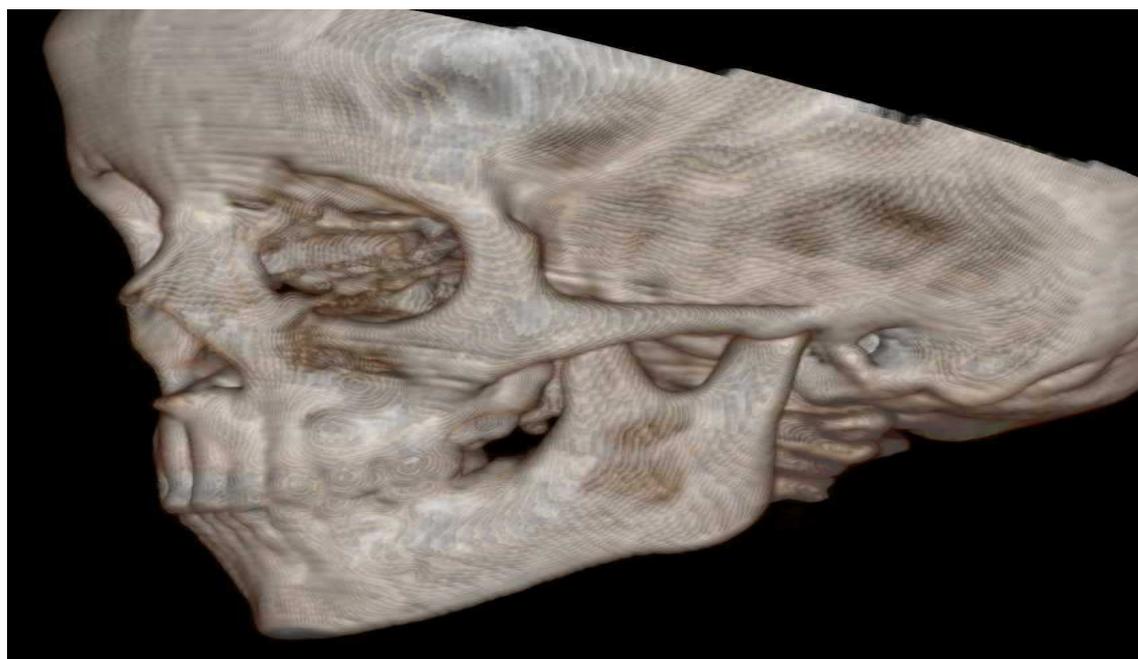
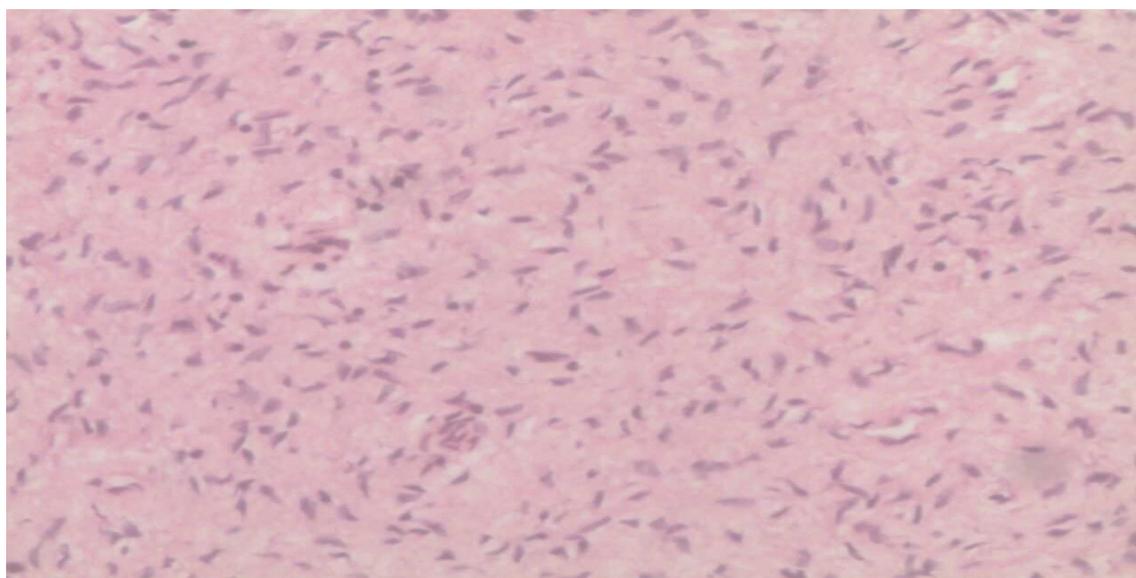


Figure IV: H&E 40X high power photomicrograph showing highly cellular lesion in a fibrous stroma



The specimen was subjected to histopathology examination which revealed a fibrous connective tissue stroma comprising of mature collagen fibres interspersed with many spindle shaped plump fibroblasts with few osteoid areas. All these features were suggestive of odontogenic fibroma (**Figure IV**).

Discussion:

Odontogenic fibroma is seen usually in the 2nd and 3rd decades of life, though rarely cases have been reported from age 5 to 80 years.¹⁷ In our case, age of the patient was 6 years. The majority of reported cases of odontogenic fibroma are seen in females¹⁸,

whereas in our case it was seen in a male patient. Odontogenic fibroma presents as a radiolucent image usually unilocular with well defined borders whereas in our case the borders were ill defined as seen in few reports.^{19,20} Though odontogenic fibroma is commonly seen in ramus, trismus as a presenting symptom is very rare and in our case the restricted mouth opening persisted even after induction of muscle relaxants for general anaesthesia and even after enucleation of the tumour and hence an intra-oral coronoidectomy helped in restoring the normal mouth opening. The histopathology of the coronoid process and the temporalis muscle attached to it suggested of muscle atrophy which was very much similar to a case series reported, wherein coronoidectomy was done for extra-articular trismus of unknown cause.²¹

Odontogenic fibroma is best treated with enucleation as it has no tendency to undergo malignant transformation^{3,7} and recurrence is not common¹⁹ and same was done in our case wherein we thoroughly enucleated the tumour, followed by curettage and peripheral ostectomy and the bony bed was treated with Carnoy's solution. The patient is under follow-up for 1 year with no signs of recurrence and a good mouth opening is maintained.

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