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Juvenile Ossifying FIBROMA-A Rare Case in Mandible

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I. Introduction

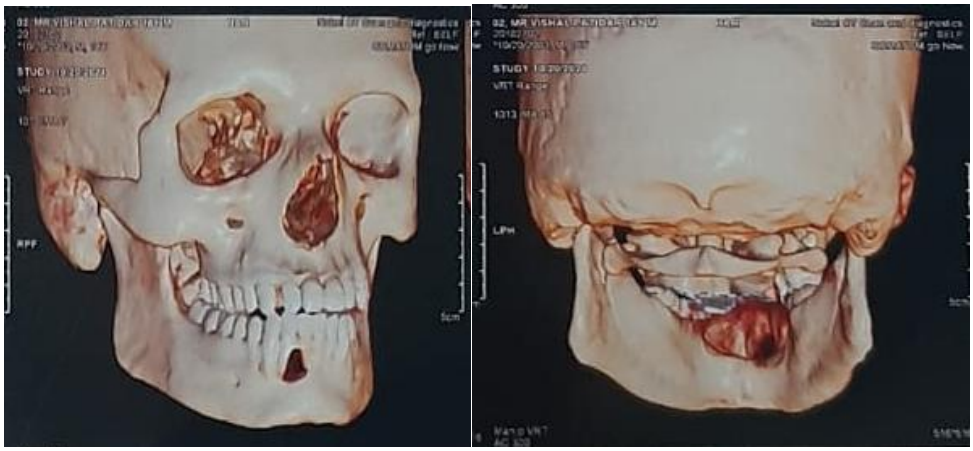
Juvenile ossifying fibroma is a benign fibro-osseous lesion.[1] Ossifying fibromas are of two types, the central type and peripheral type. Central ossifying fibroma is also of two types, conventional type and juvenile type. [2]Juvenile ossifying fibroma (JOF) is a locally aggressive variant of central ossifying fibromas of the jaws, and it has a high tendency of recurrence with more common in young ones.[2] Lesion found both in maxilla and mandible,most commonly in maxilla,paranasal sinus and sometimes orbit. It rarely involves mandible.[3] It mostly affects the children less than 15 years of age.[3] On the basis of histopathology,it is of 2 types psammamatoid and trabecular.[3] This article reports a rare case of young adult who presented with a benign lesion in floor of mouth of mandible.

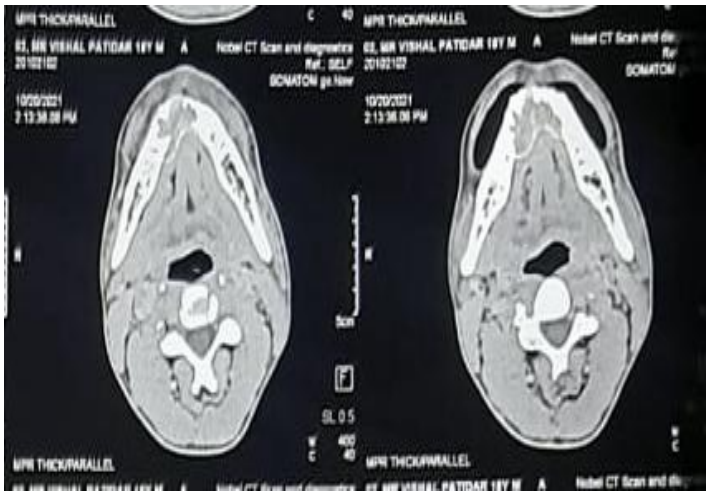
II. Case Report

A young adult male of 18 years of age reported to the out patient department of oral and maxillofacial surgery at the government dental college,indore with the chief complaint of swelling in the floor of mouth since 1 year.The swelling was dome shaped and gradually increases in size with mobility present with mandibular anterior teeth.On examination, the swelling was well defined present in the floor of mouth with the size of the lesion around 2x3 cm. Overlying mucosa was normal in color and texture.On palpation, the swelling was painless and firm in consistency. The skin overlying the lesion was free. There was no paresthesia of the tongue, lower lip or chin and no lymhadenopathy was present.

RADIOGRAPHICALLY

Ct reveals an expansile lytic lesion with internal soft tissue density involving outer and inner cortex of mandible present in relation to roots of anteriors and bilateral premolars.The lesion shows peripheral hyperdense rim.The lesion measures 2.8 x2.7x2.6 cm(AP x ML x SI).

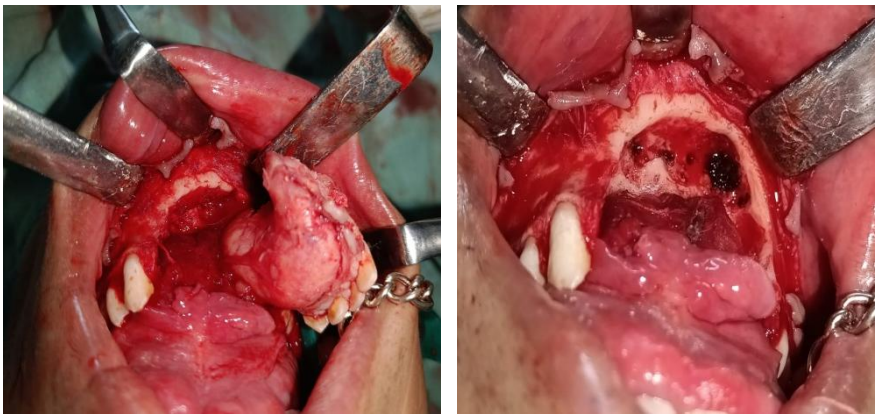




Axial section showing tumor mass with expansion of lingual cortical bone

SURGICAL PROCEDURE:

The patient was treated under general anesthesia with nasotracheal intubation.Intraoral incision was given from distal aspect of mandibular right premolar to distal aspect of mandibular left premolar.The flap was raised to expose primary tumor followed by excision of tumor mass .After thorough irrigation,defect was closed with absorbable sutures.Tumor was kept in formalin and sent for histopathological examination for confimatory diagnosis.



Intra operative view showing excision of primary tumor mass

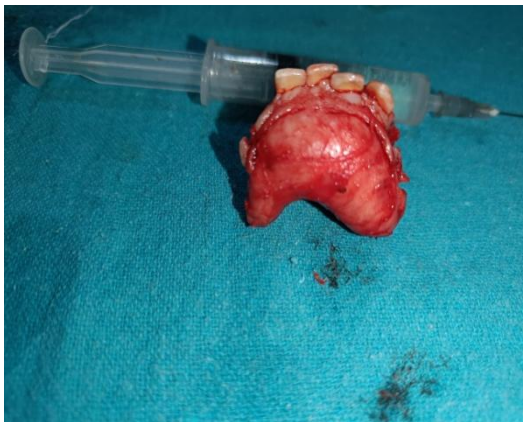


Image showing excised primary tumor with involved mandibular teeth

HISTOPATHOLOGICALLY: Biopsy report shows loose edematous cellular connective tissue with numerous fibrocytes and blood vessels.There are many cementum like deposits and bone trabeculae showing lacunae with osteocyte.

III. Discussion

In 1927 Montgomery was the first who described ossifying fibroma as a fibro-osseous lesion.In 1952 johnson was first who used the term juvenile ossifying fibroma.[4] OFs can be of two types conventional and juvenile. Conventional occurs in 30-40 years of age with sex predilection of women most commonly in mandible. On the other hand, the juvenile form is more common in maxilla.It affects children and yound adults and it grows rapidly.[3]Early age of onset, the location , the radiographic pattern, and the tendency to recur are the features of JOF.[5] It is a well-defined, well circumscribed lesion and expansile lesion .It presents as a radiolucent lesions with cortical thinning on radiographs.[2] A differential diagnosis can be established with cemento-ossifying fibroma , osteofibrous dysplasia, and fibrous dysplasia. All these benign conditions show same clinical features and final diagnosis can be made only on the basis of histological findings.[6] Non-aggressive form of juvenile ossifying fibroma are treated with conservative approach like curettage and local excision. Aggressive form should be treated with enbloc resection.[7] Troulis and colleagues suggested a staged protocol for jaw tumours in children.

Stage 1- Includes the resection and placement of a rigid internal reconstruction plate This strategy minimizes the deformity created by tumor resection and prevents both wound contraction and displacement of the bony segments.

Stage 2- Includes skeletal reconstruction with an autogenous bone graft (4–9 months after stage 1).

Stage 3-Consists of osseointegrated implant placement (5–12 months after stage 2) when possible.

Stage 4-Consists of prosthetic dental reconstruction (5–7 months after stage 3).[8]

IV. Conclusion

Juvenile ossifying fibroma is a locally aggressive tumor with high risk of recurrence.The diagnosis should be made on the basis of clinical, radiological and histopathological evidence.Treatment includes excision or resection of tumor depending on the size of lesion while ensuring the safety of the neighbouring anatomical structures.[1]

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