

Case report

COMPOUND ODONTOME AT ANGLE OF MANDIBLE: A RARE CASE REPORT

Abstract :

RATIONALE: A TUMOR LIKE LESION NEOPLASTIC CYST ARISING FROM TOOTH FORMING TISSUES. PATIENT REPORTED WITH CHIEF COMPLAINT OF LARGE HARD SWELLING OF LOWER JAW LEADING TO DIFFICULTY IN MOUTH OPENING ,FACIAL DEFORMITY AND CONSISTENT MILD PAIN .DIAGNOSIS: DIAGNOSIS OF COMPOUND ODONTOME BASED ON CLINCORADIOLOGICAL FINDINGS.TREATMENT :UNILATERAL HARD TISSUE MASS WAS SURGICALLY REMOVED FROM MANDIBLE AND RECONSTRUCTION PLATE WERE PLACED.ON SEPARATION SPECIMEN YIELDED 17 TEETH LIKE STRUCTURE .OUTCOME:HISTOLOGICALLY MULTIPLE SMALL TEETH LIKE STRUCTURES WITH IRREGULARLY ARRANGED CENTRAL FIBRO FATTY PULPAL STROMA WHICH IS SURROUNDED BY WELL FORMED DENTINAL TUBULES AND EMPTY AREAS REPRESENTING

DECALCIFIED ENAMEL MATRIX SURROUNDED BY FIBRO VASCULAR STROMA AT THE PERIPHERY SEEN.

INTRODUCTION :

Term Odontome defines any tumor or tumor -like lesion ,like neoplastic cyst arising from tooth forming tissues.[1]

Odontomas are hamartomas of terminated tooth formation which results for 22% of the odontogenic tumors.[2]

The term odontome was coined by Paul Broca in 1867 and he defined the term as tumors formed by the overgrowth or transitory of complete dental tissue.[3]

Approximately, 10% of all odontogenic tumors of the jaws are compound odontomas.[4] The incidence of compound odontome ranges between 9 and 37% and the complex odontome is between 5 and 30%. The etiology behind odontomes may be unknown.[5]

The majority of odontomas in the anterior segment of the jaws are compound composite in type (61%), whereas the majority in the posterior segment is complex composite in type (34%). Interestingly both type of odontomas occurred more frequently on the right side of the jaw than on the left, (compound 62%, complex 68%).[6]

It is related to various pathological conditions, like local trauma, inflammatory and/or infectious processes, mature ameloblasts, cell rests of serres (dental lamina remnants) or due to hereditary anomalies (Gardner's syndrome, Hermanns

syndrome), odontoblastic hyperactivity, alterations in the genetic component responsible for controlling dental development.[7]

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CASE REPORT:

A 24 year old female patient was referred to the craniomaxillofacial unit with a chief complaint of large hard swelling of left lower jaw, leading to difficulty in mouth opening, facial deformity and consistent mild pain since 3 year.

Her medical and family history was non significant. On extraoral examination a bony hard swelling of approx. size 3.5 X 4 cm size on left side of angle of mandible which was non mobile, non pulsatile, non tender and non ulcerative in nature. [fig 1] Mouth opening was mildly reduced.

On intra oral examination a unilateral hard swelling was palpable with obliteration of buccal vestibule.

The orthopantomogram radiographic picture appeared as a bunch of multiple irregular masses of calcified material surrounded by a thin radiolucent area with smooth periphery of size 3.5 cm x 4 cm approx., involving the angle of the mandible along with other well-formed impacted permanent teeth. [fig 2]

The coronal and sagittal sections of contrast-enhanced computed tomography revealed unilateral multiple large nonspecific, disorganised, irregular radio-opaque masses with varying densities. [fig3]

Extended Risdon's extraoral surgical approach was utilised and unilateral hard tissue mass was explored. [fig 4]

The hard tissue masses were gently chiseled from buccal and lingual site on the left side, while removing the hard tissue mass, the angle of mandible along with body appears weak for which a titanium plate placed. [fig5]

Specimen collected was chunks of hard tissue masses with tooth-like structures in it, which on fine separation yielded nearly 17 small teeth-like structures. [fig6]

The histopathological section shows multiple small teeth-like structures with irregularly arranged central fibrofatty pulpal stroma surrounded by well-formed dentin showing dentinal tubules and empty areas representing decalcified enamel matrix, and a diagnosis of compound odontoma was made. [fig 7]

A 3-month follow-up showed uneventfully healed surgical site without any jaw deformity. [fig8]



FIG 1 : Unilateral bony hard swelling in left side of mandible



Fig 2 : Orthopantomograph showing irregular bag of calcified mass.

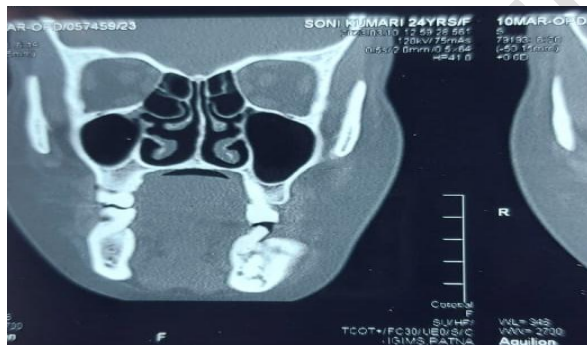


Fig 3 The coronal and sagittal sections of contrast-enhance computed tomography

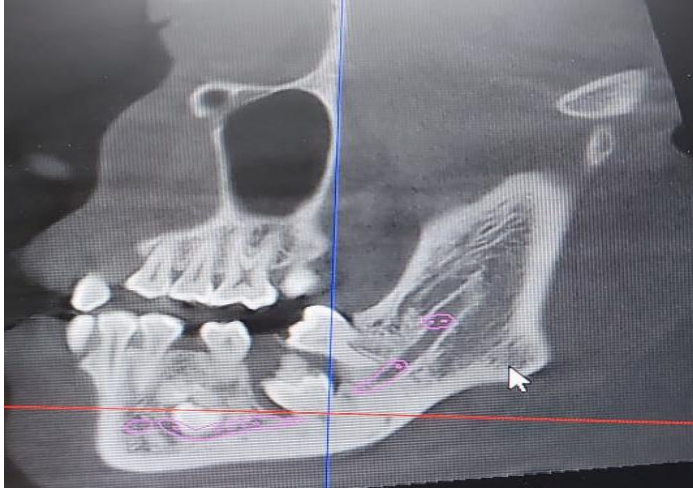


Fig 4 : Coronal and sagittal sections of computed tomography depicting bilateral multiple large nonspecific, disorganised, irregular radio-opaque mass with varying densities, unable to be recognised as a dental tissue



Fig 5 : The hard tissue masses were gently chiseled from buccal and lingual site on the left side.



Fig 6 : Specimen was collecting chunks of hard tissue masses with tooth-like structures.



Fig 7 : Surgical sites after removal of irregular hard mass. An iatrogenic fracture of the mandible occurred on the left side which was reduced and fixed with a titanium miniplate

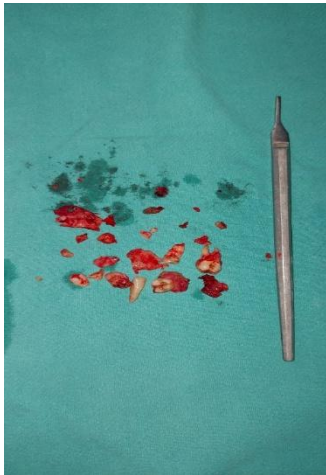


Fig 8 : Specimen showing small chunks of hard tissue masses with ill-defined tooth-like structures in it

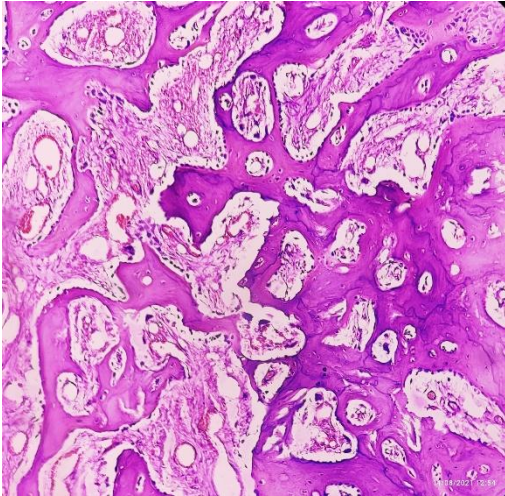


Fig 9 : Complex odontomas in the posterior most region of the jaw and compound odontomas in the anterior maxilla

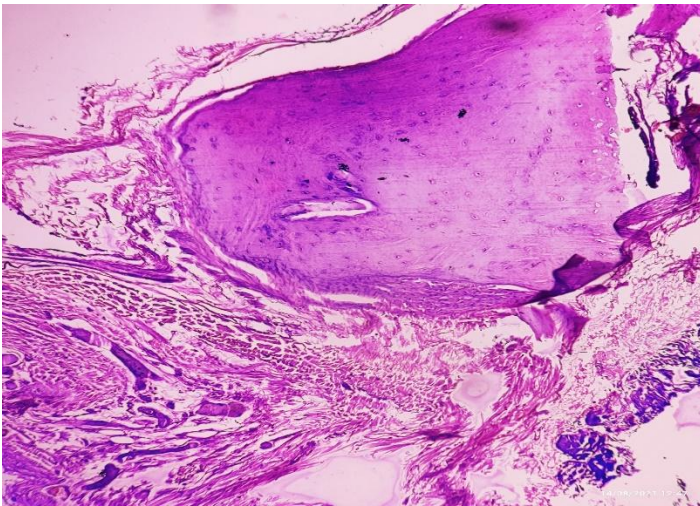


Fig 10 : An increase in the width of the regional periodontium.

Histopathological section shows multiple small tooth-like structures with irregularly arranged central fibrofatty pulp stroma surrounded by well-formed dentin showing dentinal tubules and empty areas representing decalcified enamel matrix surrounded by fibrovascular stroma at the periphery

DISCUSSION :

Compound odontoma is a rare case seen on left side of angle of mandible.[8]

Complex odontomas usually to occur in the posterior most region of the jaw and compound odontomas are more common in the anterior maxilla.[9]

Although they are commonly asymptomatic, clinical indicators of odontoma may have retention of deciduous teeth, non eruption of permanent teeth, having pain, expansion of the cortical bone and tooth displacement.

A comparison between radiographic features of both the lesions must allow the clinician to differentiate between these two diseases, which have divergent behavior and prognosis.

An increase in the width of the regional periodontium may appear. In addition, periosteal reactions may be seen, leading to development of a peripheral sunburst pattern.[10]

The surgical approaches for removal of odontoma is fine resection of affected side.

CONCLUSION :

Diagnosis of both complex and compound odontoma needs clinical expertise and surgical approaches of fine resection is only treatment mode if reported early.

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