

TWO THIRD TUMOUR (AOT) IN LOWER JAW: A RARE CASE REPORT

Surgery

Dr. Jambukeshwar Kumar. B* M D S, Reader, Dept Of Oral And Maxillo Facial Surgery, Vishnu Dental College, Bhimavaram – 534202, West Godavari (DT) *Corresponding Author

Dr. Smita Shrishali Birajdar M D S, Reader, Dept Of Oral And Maxillo Facial Pathology, Vishnu Dental College, Bhimavaram – 534202, West Godavari (DT)

Dr. Vinay Chandrappa M D S, Professor, Department Of Pedodontics, Vishnu Dental College, Bhimavaram – 534202, West Godavari (DT)

Dr . Raghavendra M Naik M D S, Reader, Department Of Oral Medicine & Radiology , Vishnu Dental College, Bhimavaram – 534202, West Godavari (DT)

ABSTRACT

Adenomatoid odontogenic tumour (AOT) is an uncommon , hamartomatous ,benign epithelial lesion of odontogenic origin(3%) that was first described by the Driebaldt in 1907 as pseudo-adenameloblastoma . Here we report a case of adenomatoid odontogenic tumour (AOT)in the mandible in a young girl of 16yrs old and its surgical management and importance of excisional biopsy , which is a gold standard for diagnosis , and its use in planning of treatment with no recurrence during the follow-up has been discussed

KEYWORDS

Adenomatoid odontogenic tumour (AOT), pleomorphic adenomatoid tumour, Two-Third Tumour.

INTRODUCTION

Adenomatoid odontogenic tumor (AOT) is a benign, hamartomatous, cystic odontogenic neoplasm, of about 0.1% of head and neck, 3%–7% of odontogenic tumors [1]. Philipsen introduced AOT, which was adopted by WHO. It's also referred as "two-thirds tumor" as it occurs in the maxilla in about 2/3rd cases, 2/3rd cases in young females, 2/3rd in unerupted tooth and 2/3rd of the affected teeth are canines [2]. It's a well-circumscribed, painless swelling which are diagnosed during routine radiological examinations, few larger dimension tumors have also been reported. The present case AOT in mandible, emphasizes on radiographic findings, pathologic correlation and to review the literature.

CASE REPORT

A 16-year-old female patient reported with a since gradually increasing painless swelling in the lower right anterior jaw region for 1 year which was asymptomatic in nature. Intraoral examination revealed a swelling in the right anterior region of the mandible involving canine measuring about 3x3cms, with vestibular obliteration. On palpation, the swelling was bony hard in consistency, nonfluctuant, nontender with no evidence of discharge. Buccolingual cortical plate expansion was noted [Fig1(a)]. Right solitary, nontender submandibular lymph node was palpable,CBCT in the right anterior mandible showed well-defined hypodense area in the right canine region measuring 18x22x20mm with expansion and thinning of buccolingual cortical plates, displacement of 43 buccally, 44 distally, 42 and 41 mesially with erosion of the lingual cortical plate at cervical region of 43[Fig1(b,c,d)] Based on the clinical and radiographic examination, differential diagnosis of unicystic ameloblastoma, ossifying fibroma and central giant cell lesion were considered.

Excisional biopsy was performed under LA, Degloving incision was given. Mucoperiosteal flap was raised and the lesion was identified at the root of the canine and was excised along with the permanent right mandibular canine [Fig2(e&f)]. Flap approximated with mersilk sutures [Fig2(g)]. Patient recalled, satisfactory healing was noted.

Specimen was creamish white & soft in consistency, oval with smooth surface along with the permanent mandibular canine. [fig3(h)]. On H&E Staining, revealed tumor mass composed of oval to spindle-shaped cells forming cords, sheets and whorled masses, solid nodules of cuboidal epithelial cells forming rosette-like structures in a scant connective tissue stroma [Fig3(i)]. Based on these distinctive histomorphological features, the final diagnosis of extrafollicular variant of AOT was established. Follow up done for 15 days & 6 months [Fig3(j&k)].

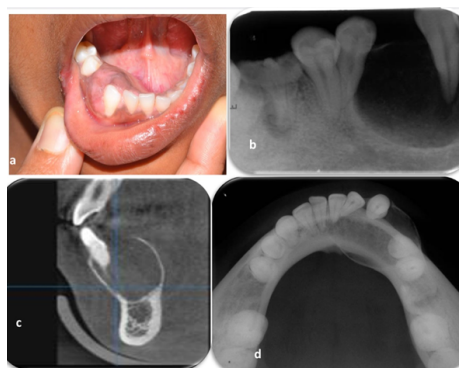


Fig 1 : Preoperative Clinical Pictures & Radiographs



Fig 2: Intraoperative Clinical Pictures



Fig 3: Excised tissue with tooth Histopathological slide & Post Op Pictures

DISCUSSION

The uncertain histogenesis of AOT has long been a debate whether it is a true benign neoplasm or an anomalous hamartomatous growth. It is a rare benign lesion with a low recurrence rate. 75% of lesions occur in the maxillary anterior region, radiopacities were developed in 77% of radiolucent lesions [3].

Depending on its location and tooth association, Follicular type associated with an impacted tooth (73%) with mean age of 17 years, extrafollicular with mean age of 24 years (24%). Nearly 30% of the central AOTs are not pericoronal, demonstrate a relationship to the roots of adjacent teeth. Divergence of roots and displacement of teeth occurs more frequently than root resorption. In the present case, radiolucency was noticed between premolar and permanent mandibular canine with minimal displacement, without resorption.

Most common site of extrafollicular AOT is anterior region of maxilla, 28% lesions in the mandibular incisor area [4] observed in present case. Yilmaz et al. described a case with AOT, presenting similar findings [5]. It is generally believed that the lesion is not a neoplasm. In the present case, numerous hyperchromatic cells spindle-shaped cells forming cords, sheets and whorled masses, solid nodules of cuboidal epithelial cells forming rosette-like structures with numerous mitotic figures. Duct-like structures with varying lumen size lined by cuboidal to columnar epithelial cells with polarized nuclei.

Present case reported its unusual radiologic, histopathologic features and rare location presents a clinical challenge to the clinician.

Compliance with Ethical Standards

Funding:

There was no funding received for this study.

Conflict of interest:

Author Jambukeshwarkumar.B declares that he has no conflict of interest. Author Smitashrishail birajdar declares that she has no conflict of interest. Author Vinay chandrappa declares that he has no conflict of interest. Author Raghavendra M naik declares that he has no conflict of interest.

Ethical Approval:

All procedures performed in studies involving human participants were in accordance with ethical standards of institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

INFORMED CONSENT:

Informed consent was obtained from individual (patient). In the present study patient was below 18 years so her parent has given the consent, which has been enclosed.

REFERENCES

1. Regezi JA, Kerr DA, Courtney RM. Odontogenic tumors: Analysis of 706 cases. *J Oral Surg.* 1978; 36:771–8
2. Philipsen HP, Reichart PA, Zhang KH, Nikai H, Yu QX. Adenomatoid odontogenic tumor: Biologic profile based on 499 cases. *J Oral Pathol Med.* 1991; 20:149–58. [PubMed]
3. Becker T, Buchner A, Kaffe I. Critical evaluation of the radiological and clinical features of adenomatoid odontogenic tumour. *Dentomaxillofacial Radiology.* 2012; 41(7):533–540. doi:10.1259/dmfr/19253953. [PMC free article] [PubMed] [CrossRef]
4. Leon J. E., Mata G. M., Fregnani E. R., et al. Clinicopathological and immunohistochemical study of 39 cases of adenomatoid odontogenic tumour: a multicentric study. *Oral Oncology.*
5. Yilmaz N., Acikgoz A., Celebi N., Zengin A. Z., Gunhan O. Extrafollicular Adenomatoid odontogenic tumor of the mandible: report of a case. *European Journal of Dentistry.* 2009; 3:71–74. [PMC free article] [PubMed]