



Case Report

Ameloblastoma-A Case Presentation

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Abstract

Ameloblastoma is a true neoplasm of enamel organ type of tissue which does not undergo differentiation to the point of enamel formation. It is also called adamantinoma, adamantoblastoma, multilocular cyst. Robinson described the tumour as 'usually unicentric, nonfunctional, intermittent in growth, anatomically benign, clinically persistent'⁽¹⁾. In this report we present a plexiform type of ameloblastoma in the right side of the ramus of mandible in a 27years old male.

Keywords: Ameloblastoma, multilocular, radiolucency, plexiform.

Introduction

Ameloblastoma is the second most common tumour after odontoma. It is a benign tumour of epithelial odontogenic origin.⁽¹⁾ It occurs more commonly in mandible than maxilla. It is a painless, slow growing, bony hard swelling, locally aggressive tumour which invades the cortical bone and adjacent tissue.⁽²⁾ It occurs in people from 20 to 60 years. No specific gender predilection is seen in ameloblastoma.⁽³⁾

Diagnosis is done with conventional radiograph, CT and MRI to know the accurate extent of the lesion. Radiographically, they are seen as unilocular or multilocular radiolucency with bony septate presenting a soap bubble or honey comb or tennis racket appearance. Root resorption and

buccal and lingual plate expansion are the common finding in ameloblastoma.⁽⁴⁾

Histologically ameloblastoma is classified into six variant types: follicular, acanthomatous, granular cell, basal cell, plexiform, desmoplastic ameloblastoma, unicystic ameloblastoma. Follicular and plexiform type of ameloblastoma are more common.⁽¹⁾

Treatment depends on type and size of the lesion. Ameloblastoma is treated by curettage, enucleation, enbloc resection, segments resection. Excision of lesion with few millimeters of healthy tissues is done to prevent recurrence of tumour.⁽⁵⁾

Case Report



Figure: 1 A 27 years old male patient

A 27 years old male (Fig:1) reported to the department of Oral Medicine and Radiology with the complaint of swelling in his right side of the face since 2months. History reveals that the swelling is painless, insidious in onset which gradually increased and reached the present size. No history of fever, trauma or tooth ache was reported.

General and Systemic examinations are non-contributory. On extra oral examination, a solitary dome shaped swelling measures about 6cm x 5cm with a smooth surface extending superiorly 2cm below the zygomatic arch, inferiorly 2cm below the angle of mandible, medially 2cm away from the commissure of lip and distally up to the posterior border of ramus of mandible. On palpation, the swelling was hard, non-compressible, non-fluctuant, temperature of overlying skin was normal and non-tender. A right side submandibular lymph node palpable in the right side of the face are one in number, discrete, firm and tender.



Figure: 2 Intraoral photograph of patient

Intraorally, (figure: 2) On inspection, a Solitary erythematous oval shaped swelling is present in buccal aspect of gingiva and alveolar mucosa in relation to 46, 47 region, measures about 0.5cm X 0.7 cm. Surface of the lesion is smooth with ill defined margins. On palpation, the swelling is soft in consistency, fluctuant and tender. On soft tissue examination, gingiva bleeds on probing, pocket depth of 5mm in 47 region. Hard tissue examination shows root stumps in 46 and 37, grade II mobility and mesial tipping in 47. Based on chief complaint, history and clinical findings, this case was provisionally diagnosed as ameloblastoma in right side of the mandible in relation to 46 47.

Patient was subjected to Orthopantomogram (OPG) and haematological examination.

OPG (figure:3) shows, well defined radiolucency with soap bubble multilocular appearance causing cortical bone expansion in the ramus and body of the mandible. The lesion extends from distal root of 46 to middle region of ramus of mandible. External root resorption is seen in relation to 47,48. Tipping of 47,48 is seen. Two radioopaque structures are present in between 46 and 45, near to the periapical area of 45 but not attached to 45, was differentially diagnosed as idiopathic osteosclerosis, compound odontome.



Figure: 3 Orthopantomogram of patient

Haematological findings show that patient is diabetic, no other significant findings reported. Incisional biopsy was made for histopathological examinations.

Histopathology of incisional biopsy specimen section shows tiny fragments of multiple irregular soft and hard tissue. One area shows islands of odontogenic epithelial cells arranged in

anatomising chords with peripheral layer of columnar cells resembling ameloblast. Inner cells are loose resembling stellar reticulum cells. The intersecting connective tissue is made up of vascular loose fibrous connective tissue. Trabeculae of bone is also seen in multiple areas. Histopathology is suggestive of plexiform ameloblastoma.

Based on provisional diagnosis, radiographic and histopathological finding this case is diagnosed as plexiform ameloblastoma in right side of ramus of mandible in relation to 47,48. Patient is advised for surgical excision of the lesion and regular follow -up every 3months to monitor the recurrence.

Discussion

Ameloblastoma is the most common benign tumour of epithelial origin which is locally aggressive causing destruction of bone and adjacent tissues.^(6,7,8) Ameloblastoma occurs more commonly in middle aged people between 20 to 40 years.⁽⁹⁾ .Ameloblastoma occurs frequently in mandible (83.5% to 88%) especially in third molar and ascending ramus of mandible than maxilla.^(6,10) Similarly in this case report we present a case who is 27 years old with meloblastoma in the body and ramus of mandible. Ameloblastoma is a slow gradually growing hard ,painless swelling causing buccal and lingual cortical plate expansion resulting in facial asymmetry.^(2,4) In this case also patient has a hard, painless, silent, slow growing swelling with cortical bone expansion resulting in facial asymmetry. Ameloblastoma cause migration, tipping, mobility of teeth , root resorption and parathesia of lips .One study showed that 81% of cases showed root resorption.⁽¹¹⁾ This case also presents with tipping of 47and 48; mobility of 47 and root resorption in relation to 47,48.

Ameloblastoma is clinically classified as intra-osseous and extra-osseous ameloblastoma and histologically ameloblastoma is classified as follicular, plexiform, acanthomatous, desmoplastic, basal cell type, granular and unicystic.⁽¹⁾ Among these follicular and plexiform

are common type of ameloblastoma.^(1,6) Among all, plexiform is less aggressive with low recurrence rate.⁽¹²⁾

In plexiform ameloblastoma, ameloblast like cells are arranged in network of interconnecting strands of cells,bound by columnar cells. In between these layers stellate reticulum like cells are present.⁽¹⁾ As given in literature histological examination of this case present tiny fragments of multiple irregular soft and hard tissue and epithelial cells are arranged in anatomising chords with peripheral columnar cells resembling ameloblast like cells.

Complete removal of the lesion is necessary. Types of treatment include curettage, chemical and electrocautery, conservative surgical excision, radiation therapy and combination of surgery and radiation.⁽¹⁾ While excision to prevent recurrence removal of surrounding healthy tissues is also done for Safety.^(5,13) Regardless of type of treatment long term follow up is recommended.^(1,14)

Conclusion

To conclude ameloblastoma is a more commonly occurring odontogenic tumour, in middle aged people more often in the ramus of mandible and its recurrence rate depends more on method of surgical treatment.⁽¹⁵⁾

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