

Original Research

Clinicopathological characteristics of Ameloblastomas in a given population- A retrospective study

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ABSTRACT:

Background: Ameloblastoma is one of the most common odontogenic tumour. The present study was conducted to assess clinicopathological characteristics of ameloblastomas in patients. **Materials and methods:** The present retrospective study was conducted on 60 cases of OSCC of both genders. Patient information such as name, age, gender etc. was retrieved from case history performa. In all patients, anatomic location, histopathological type and clinical features and radiographic features were considered. **Results:** Of the 60 samples, highest number of cases belonged to age group 30-39 years (n=14) followed by 20-29 years (n=12). Lowest number of cases were observed in the age group 60-69 years (n=2). We observed that 39 cases were seen in mandible and 21 in maxilla. The most common type of ameloblastoma was follicular ameloblastoma in both maxilla and mandible. We observed that swelling was the most common chief clinical symptom for ameloblastoma followed by pain and paresthesia and pain and swelling. **Conclusion:** The most common type was follicular type. The most common site was mandible posterior region. Most common symptom was swelling.

Keywords: Ameloblastoma, Follicular, Plexiform.

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INTRODUCTION:

According to the World Health Organization, ameloblastoma is a benign odontogenic tumor originating from the proliferation of odontogenic epithelium without involvement of the mesenchymal tissue.¹ It accounts for 1% of all tumors of the maxilla as well as 11% of all odontogenic tumors. The slow, painless growth of this tumor often results in a late diagnosis. Although benign, ameloblastoma is locally invasive and therefore surgery with a margin of safety is the treatment of choice, which results in considerable mutilation in many cases.² However, the mechanism for this invasive behavior remains unknown

It is a benign tumour but has aggressive characteristics such as persistent growth and locally invasive to surrounding structures.³

Ameloblastoma shows variable geographic prevalence, being the most common benign odontogenic tumor in China and Africa, while it is the second most common in the United States and Canada (odontoma being most common). African Americans have an overall fivefold increased risk of disease as compared to Caucasians. Global incidence has been estimated at 0.5 cases per million person years, and most cases are diagnosed in patients 30–60 years of age.⁴ The present study was

conducted to assess clinicopathological characteristics of ameloblastomas in patients.

MATERIALS AND METHODS:

The present retrospective study comprised of 60 cases of OSCC of both genders. Ethical approval was obtained from institutional ethical committee.

Patient information such as name, age, gender etc. was retrieved from case history performa. In all patients, anatomic location, histopathological type and clinical features and radiographic features were considered. Results

thus obtained were subjected to statistical analysis. P value of less than 0.05 was taken as significant.

RESULTS:

Of the 60 samples, highest number of cases belonged to age group 30-39 years (n=14) followed by 20-29 years (n=12). Lowest number of cases were observed in the age group 60-69 years (n=2). We observed that 39 cases were seen in mandible and 21 in maxilla. The most common type of ameloblastoma was follicular ameloblastoma in both maxilla and mandible. We observed that swelling was the most common chief clinical symptom for ameloblastoma followed by pain and paresthesia and pain and swelling.

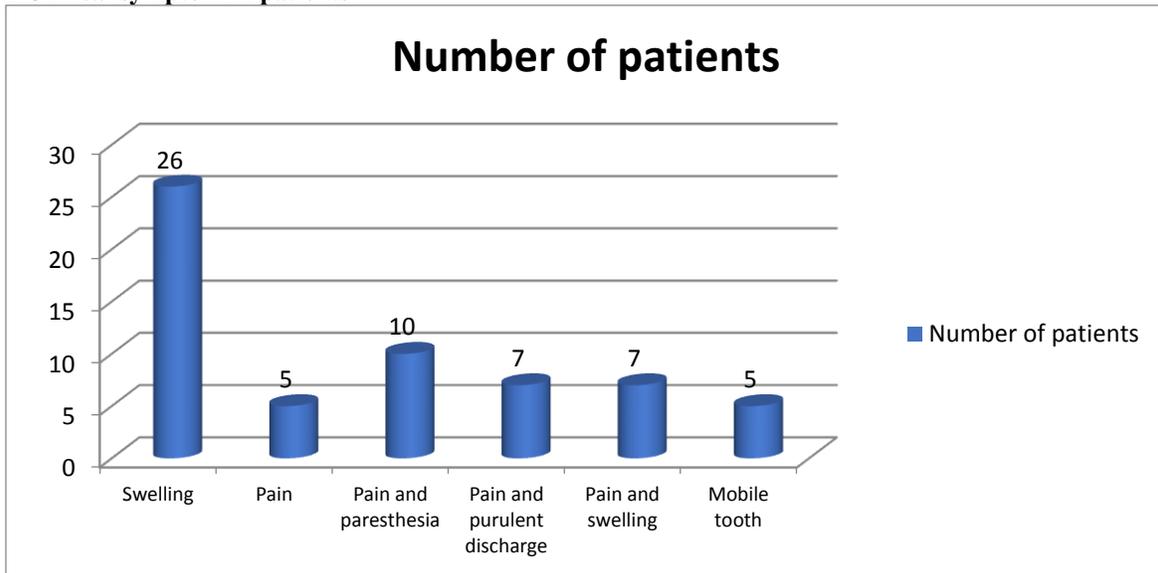
Table 1: Age wise distribution of patients

Age (years)	Number of patients
0-9	8
10-19	9
20-29	12
30-39	14
40-49	6
50-59	5
60-69	2

Table 2: Distribution of ameloblastoma cases on the basis of site and type

Histologic type	Maxilla				Mandible					
	Ant.	Premolar	Molar	Total	Ant.	Premolar	Molar	Angle	Ramus	Total
Follicular	2	3	5	10	1	1	10	2	1	15
Plexiform	-	1	3	4	-	1	4	3	2	10
Acanthomatous	-	2	3	5	-	2	3	1	1	7
Unicystic	1	-	1	2	2	3	2	-	-	7

Figure I Clinical symptom in patients



DISCUSSION:

Ameloblastoma is a benign odontogenic tumor (OT) originating from the proliferation of odontogenic epithelium without involvement of the mesenchymal tissue. The most common presentation for ameloblastoma is a painless swelling of the mandible or maxilla, though in a series of 60 patients, up to 35 % had their lesion identified as an incidental finding on imaging.⁵ Pain is uncommon but can occur because of hemorrhage, especially following a fine needle aspiration (FNA). Pain with rapid growth may represent the rare malignant ameloblastoma. Tooth displacement and root resorption are infrequent but have been reported in up to 25 % of desmoplastic ameloblastomas. Paresthesias are uncommon, with rare reported cases of perineural invasion.⁶ The present study was conducted to assess clinicopathological characteristics of ameloblastomas in patients.

In this study, out of the 60 samples, highest number of cases belonged to age group 30-39 years (14) followed by 20-29 years (12). Lowest number of cases was observed in the age group 60-69 years (2). We observed that 39 cases were seen in mandible and 21 in maxilla.

Chidzonga et al⁷ conducted a study in which eighty-nine cases of ameloblastoma were found: 78 cases of solid tumor (88.6%), two cases of desmoplastic tumor (2.2%) and nine cases of the unicystic tumor (10.2%). There was a predominance of the female gender (58.4%) and Caucasian ethnicity (62.9%). Most ameloblastomas were located in the mandible (78.6%) and 40.2% occurred prior to the third decade of life. The present findings are in agreement with those reported in previous studies carried out in other states of Brazil and support that notion that there may be a geographical influence on the profile of patients affected by ameloblastoma.

We found that The most common type of ameloblastoma was follicular ameloblastoma in both maxilla and mandible. We observed that swelling was the most common chief clinical symptom for ameloblastoma followed by pain and paresthesia and pain and swelling. Only pain was the rarest chief clinical symptom.

Gupta et al⁸ found that seventy ameloblastomas composed the final sample, including 57 (81%) solid/multicystic, 9 (13%) unicystic, 2 (3%) desmoplastic and 2 (3%) peripheral ameloblastomas. Mean age of the affected patients was in the fourth decade of life and there was a slight male predominance. Most tumors presented as multilocular radiolucencies, were located in the posterior mandible and showed the follicular and plexiform histological patterns. There was no difference on the mean age of the patients affected by solid and unicystic ameloblastomas.

Filizzola AI et al⁹ analyzed the clinicopathological features from a series of ameloblastomas. Seventy ameloblastomas composed the final sample, including 57 (81%) solid/multicystic, 9 (13%) unicystic, 2 (3%) desmoplastic and 2 (3%) peripheral ameloblastomas. Mean age of the

affected patients was in the fourth decade of life and there was a slight male predominance. Most tumors presented as multilocular radiolucencies, were located in the posterior mandible and showed the follicular and plexiform histological patterns.

Ledesma-Montes *et al*¹⁰ have reported that 63% of their ameloblastomas derived from Mexican and Guatemalan populations were unicystic, in contrast with the results from studies including other Latin American (Brazilian) populations. Social, ethnic and geographic differences, associated with difficulties in establishing uniform diagnostic criteria and inclusion of incisional biopsy-derived together with surgical resection specimens can justify some variations in the frequency of the ameloblastomas subtypes (5,9). Peripheral and desmoplastic ameloblastomas are the less frequent subtypes and represent from 1 to 4% and from 1 to 8% of all ameloblastomas, respectively.

CONCLUSION:

Authors found that most common type was follicular type and the most common site was mandible posterior region. Most common presenting symptom was swelling.

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