

## ORIGINAL RESEARCH

### Assessment of cases of odontogenic tumors- A clinical study

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#### ABSTRACT:

**Background:** Odontogenic tumors (OTs) are group of heterogeneous lesions possesses characteristic features. The present study was conducted to assess cases of odontogenic tumors. **Materials & Methods:** The present retrospective study was conducted on 56 cases of OTs. Parameters such as name, age, gender, clinical features, location, extension etc were noted. All cases were classified according to the latest WHO classification of head & neck tumors. **Results:** Out of 56 cases, 30 were in males and 26 were in females. The most common was ameloblastoma constituting 23 cases, KCOT (10), odontoma (4), odontogenic myxoma (2), Calcifying epithelial odontogenic tumor (CEOT) (7), cementoblastoma (2) and calcifying cystic odontogenic tumor (8). The P value found to be 0.01 (significant). Common clinical features in OTs were facial disfigurement seen in 52 patients, swelling in 51 and pain in 34. The difference was significant ( $P < 0.05$ ). **Conclusion:** The most common lesion was ameloblastoma followed by KCOT and Calcifying cystic odontogenic tumor.

**Key words:** Ameloblastoma, Odontogenic tumors, KCOT

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#### INTRODUCTION

Odontogenic tumors (OTs) are those who arise in odontogenic tissues are group of lesions occurring in the jaw bones. Epithelial and mesenchymal tissues are odontogenic tissues and thus OTs involves epithelial or mesenchymal tissues. They constitute 1% of all tumors.<sup>1</sup> World Health Organization (WHO) classification has divided them into three subclasses: epithelial, mesenchymal, and mixed. The most common is ameloblastoma and keratocystic odontogenic tumor (KCOT).<sup>2</sup>

Ameloblastoma is a neoplasm of odontogenic epithelium, principally of enamel organ-type tissue that has not undergone differentiation to the point of hard tissue formation. It accounts for about 1% of all oral tumors and about 9-11% of odontogenic tumors. It is generally a slow-growing but locally invasive tumor. Its peak incidence is in the third to fourth decades of life and the male: Female ratio is 1:1. Its incidence was 0.6 cases/million, and of 0.31 cases/million in a white population of South Africa. Ameloblastoma accounted for 60.3% of all odontogenic tumors in Indian population; with a mean age of presentation of 30.2 years.<sup>3</sup> A slight male predilection and major occurrence in the mandibular

molar-ramus area were elicited. They are classified as unicystic, multicystic or solid, 86% of cases are multicystic ameloblastomas. Ameloblastoma in the mandible can progress to great size and cause facial asymmetry, displacement of teeth, malocclusion, and pathologic fractures.<sup>4</sup> The present study was conducted to assess cases of odontogenic tumors.

#### MATERIALS & METHODS

The present retrospective study was conducted in the department of Oral Medicine & Radiology. It comprised of 56 cases of OTs. Ethical clearance was obtained from institutional ethical committee. Parameters such as name, age, gender, clinical features, location, extension etc were noted. Radiographs related to OTs were also retrieved from the departmental library. All cases were classified according to the latest WHO classification of head & neck tumors. Data thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

#### RESULTS

Table I shows that out of 56 cases, 30 were in males and 26 were in females.

Table II shows that the most common was ameloblastoma constituting 23 cases, KCOT (10), odontoma (4), odontogenic myxoma (2), Calcifying epithelial odontogenic tumor (CEOT) (7), cementoblastoma (2) and calcifying cystic odontogenic tumor (8). The P value found to be 0.01 (significant).

**Table I:** Distribution of cases

Total- 56		
Gender	Males	Females
Number	30	26

**Table II:** Type of OTs

OTs	Number	P value
Ameloblastoma	23	0.01
KCOT	10	
Odontoma	4	
Odontogenic myxoma	2	
Calcifying epithelial odontogenic tumor (CEOT)	7	
Cementoblastoma	2	
Calcifying cystic odontogenic tumor	8	

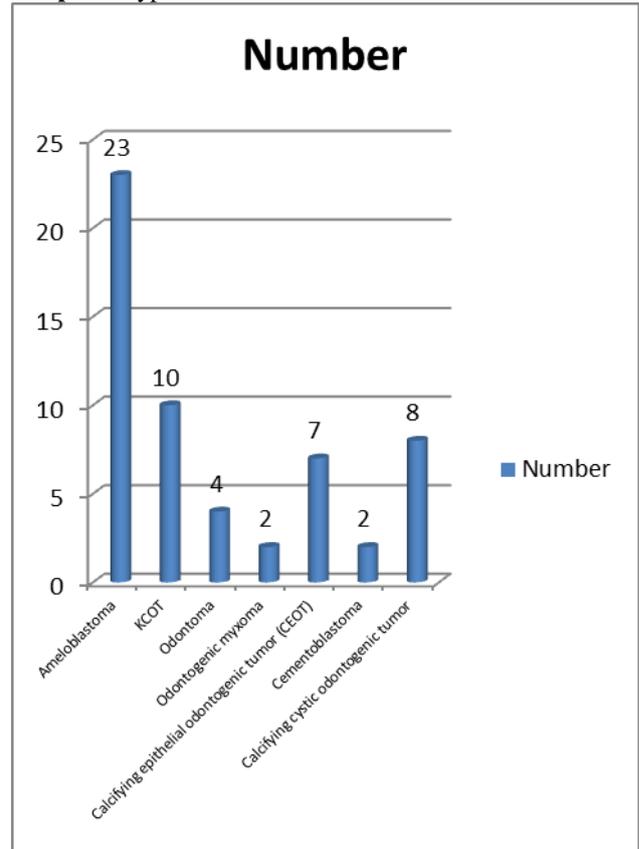
Graph II shows that common clinical features in OTs were facial disfigurement seen in 52 patients, swelling in 51 and pain in 34. The difference was significant (P< 0.05).

**DISCUSSION**

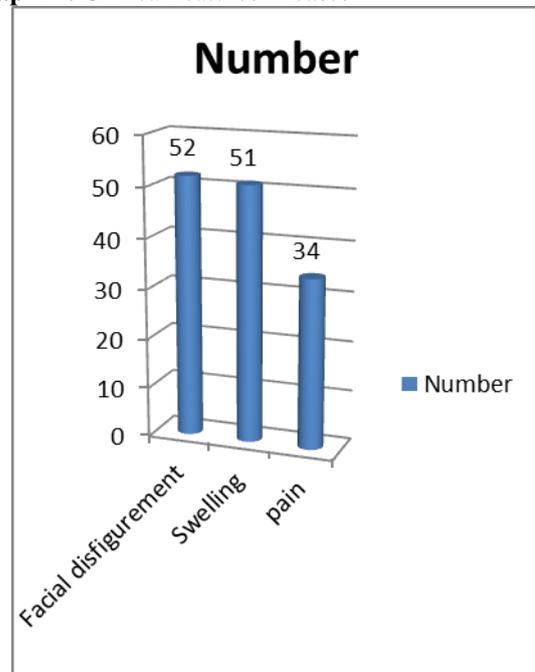
A thorough knowledge of their clinical and histological features are mandatory in order to reach out the correct diagnosis. The clinician should be aware of the oral features, typical patterns and location etc. The pathologist should know characteristic features of each and every tumor so that the chances of confusion are eliminated. Odontogenic tumors are of paramount important as these are responsible for facial disfigurement. Among various OTs, ameloblastoma is commonly occurring entity.<sup>5</sup> Ameloblastoma, is derived from the English word “amel” which means enamel and the Greek word “blastos” which means the germ. It arises from the epithelium of the dental lamina, and it is characterized by its local aggressive behavior and a high recurrence rate.

Ameloblastoma was first described in 1827 by Cusack. In 1885, Malassez introduced the name “adamantinoma,” which is presently used to illustrate a rare form of bone cancer described by Fisher in 1913<sup>6</sup>

**Graph I:** Type of OTs



**Graph II:** Clinical features in cases



The present study was conducted to assess cases of odontogenic tumors.

We found that out of 56 cases, 30 were in males and 26 were in females. The most common was ameloblastoma constituting 23 cases, KCOT (10), odontoma (4),

odontogenic myxoma (2), Calcifying epithelial odontogenic tumor (CEOT) (7), cementoblastoma (2) and calcifying cystic odontogenic tumor (8). The P value found to be 0.01 (significant). Olaitan et al<sup>7</sup> clinically and pathologically studied 238 Odontogenic tumors and found 36% of occurrence of keratocystic Odontogenic tumor. The important feature of this tumor was the destructive nature which demands attention.

We found that common clinical features in OTs were facial disfigurement seen in 52 patients, swelling in 51 and pain in 34. Garg et al<sup>8</sup> in their 30-year evaluation of odontogenic tumors in an Iranian population also found similar results. Vidya et al<sup>9</sup> found that among 8,766 patients, only 165 odontogenic tumors (1.9%) were found, with a mean age of 26.3 years (range 6-81 years). One hundred and fifty-eight tumors were central with high frequency in the posterior region of both jaws especially in the mandible and seven were peripheral tumors, including five in the posterior mandible and two in anterior maxilla. Malignant transformation was seen in three cases as malignant ameloblastoma (1.8%). The most common tumor was ameloblastoma, followed by odontoma, odontogenic myxoma, and adenomatoid. Francisco et al<sup>10</sup> found that a total 156 epithelial odontogenic tumor were reported. Of these, all of them were benign. Ameloblastoma was the most frequent type (85.9 %), followed by adenomatoid odontogenic tumor (10.9 %) and calcifying epithelial odontogenic tumor (3.2 %). The mean age of the patients was 38 years, with a wide range (11-80 years). The posterior region of mandible was the anatomic site most frequently affected by this disease, and no significant differences were found between sexes in the diagnosis of odontogenic tumors. A marked geographic variation in the relative incidences of various epithelial odontogenic tumors was found.

## CONCLUSION

Authors found that the most common lesion was ameloblastoma followed by KCOT and Calcifying cystic odontogenic tumor.

## REFERENCES

1. Tawfik, M. A. & Zyada, M. M. Odontogenic tumors in Dakahlia, Egypt: analysis of 82 cases. *Oral Surg. Oral Med. Oral Pathol. Oral Radiol. Endod.* 2010; 109(2): 67-73.
2. Singh HP, Yadav M, Nayar A, Verma C, Aggarwal P, Bains SK. Ameloblastomatous calcifying ghost cell odontogenic cyst- a rare variant of a rare entity. *Annali di Stomatologia* 2013;4(1): 156-160.
3. Santos JN, Pereira Pinto L, Figueredo CRLV, Souza LB. Odontogenic tumors: analysis of 127 cases. *Pesqui Odont Bras* 2001;15: 308-13.
4. Kaur S, Samdan D, Saigal A, Singh A, Singh R, Bains SK. Diagnosing through CBCT- Reality via virtuality - Series of three cases of KCOT. *J Stomatognathic Scie.* 2014; 4(1): 27-32.
5. Ledesma-Montes C, Mosqueda-Taylor A, Carlos-Bregni R, de Leon ER, Palma-Guzman JM, Perez-Valencia C, et al. Ameloblastomas: a regional Latin-American multicentric study. *Oral Dis* 2007;13(3):303-7.
6. Bhatia A, Bains SK, Garg E, Kaur I. Keratocystic odontogenic tumor in ramus of Mandible- a case report with ct findings. *J Adv Med Dent Scie Res* 2015; 3 (2): 105-8.
7. Olaitan AA, Adeola DS, Adekeye EO. Ameloblastoma: clinical features and management of 315 cases from Kaduna, Nigeria. *J Craniomaxillofac Surg* 1993; 21:351-5.
8. Garg E, Bembi R, Bains SK, Bhatia A, Arya S Ameloblastoma- a case report- emphasizing the value of computed tomography in radiographic diagnosis. *J Adv Med Dent Scie Res* 2016; 4(2):71-74.
9. Vidya Kadashetty et al. Odontogenic tumors- A retrospective study of 102 cases. *IJO CR* 2014; 2 (1): 7-11.
10. Francisco et al. Clinicopathological and demographic characteristics of ameloblastomas in a population from Bahia, Brazil. *Rev. odonto ciênc.* 2010; 25(3): 250-255.