

ORIGINAL ARTICLE

Assessment of 22 cases of Unilocular Lesions occurring in Anterior Mandible

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ABSTRACT:

Background: Mandibular anterior region is quite rare site for the occurrence of any pathology. Most of the lesions are found in mandibular posterior region. The present study was conducted to assess the occurrence of unilocular lesions occurring in mandibular anterior region. **Materials & Methods:** The present study was conducted in the department of Oral & maxillofacial surgery. It comprised of 22 cases of unilocular radiolucency. All were subjected to panoramic radiographs. Patients were subjected to aspiration, incisional biopsy and surgical procedures. **Results:** Out of 22 cases, 14 were seen in males and 8 in females. The difference was significant ($P < 0.05$). Lesions were KCOT seen in 1 male and 1 female, radicular cyst in 1 male and 2 females, AOT seen in 2 males and 2 females, dentigerous cyst in 1 male and 1 female, ameloblastoma in 1 male and 1 female, CGCG in 2 males and 6 females and ossifying fibroma in 1 female. The difference was significant ($P < 0.05$). Management includes enucleation (4), marginal mandibulectomy (3), curettage (2), marsupialization (3), intralesional steroids (4) and excision (6). The difference was significant ($P < 0.05$). **Conclusion:** Mandibular anterior unilocular lesions are not commonly encountered. The present study reported 22 cases, mostly in females. Management included enucleation, marginal mandibulectomy, curettage, marsupialization, intralesional steroids and excision.

Key words: Curettage, Enucleation, Marsupialization.

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INTRODUCTION

Mandibular anterior region is quite rare site for the occurrence of any pathology. Most of the lesions are found in mandibular posterior region. Most are associated with mandibular third molar such as dentigerous cyst, keratocystic Odontogenic tumor (KCOT) and ameloblastoma etc. Impacted mandibular third molars are prone to involved in most of the pathologies. The occurrence of lesion in anterior region is entity. Thus Careful analysis is required to differentiate various pathologies.¹

Assessment of clinical features, history and confirmation by histopathology is necessary in reaching final diagnosis. Surgical intervention provides useful information regarding the nature of the lesion. Most of the lesions are multilocular but the occurrence of unilocular lesions cannot be overlooked.²

Unilocular appearance usually represent unaggressive, slow growing, benign process. Radiographic findings are also of equal importance, viz. corticated/non-corticated borders, regular/irregular borders, root displacement, root resorption, mandibular canal displacement, and lingual cortex expansion. Aggressive benign or malignant lesions tend to favor irregular and non-corticated borders, lingual

cortex expansion, resorption of adjacent tooth roots, and erosion of mandibular canal with resultant paresthesia.³

The most common entity occurring in mandibular anterior region is radicular cyst. There are reports of presence of dentigerous cyst associated with impacted lower canines which are quite rare. KCOT and adenomatoid Odontogenic tumor (AOT) may be present in few cases.⁴ The present study was conducted to assess the occurrence of unilocular lesions occurring in mandibular anterior region.

MATERIALS & METHODS

The present study was conducted in the department of Oral & maxillofacial surgery. It comprised of 22 cases of unilocular radiolucency seen in both genders. All patients were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior to the study.

General information such as name, age, gender etc. was recorded. All were subjected to panoramic radiographs. Patients were subjected to aspiration, incisional biopsy and surgical procedures. After this the specimens were submitted to histopathological department for analysis. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

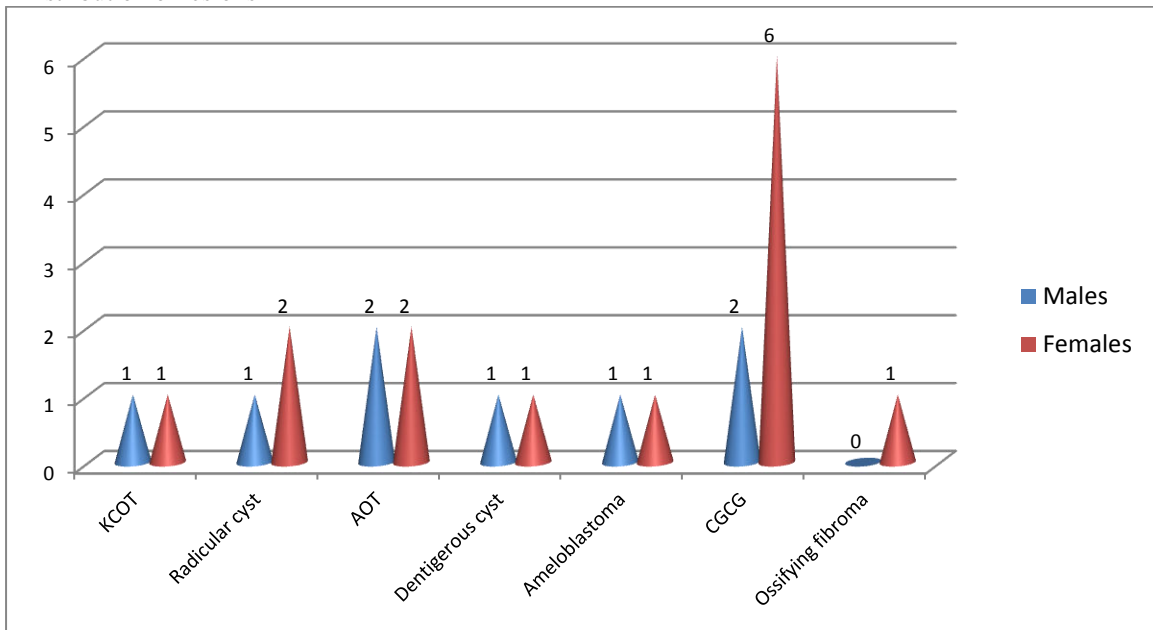
RESULTS

Table I Distribution of cases

		Total- 22	
Males	Females		P value
14	8		0.05

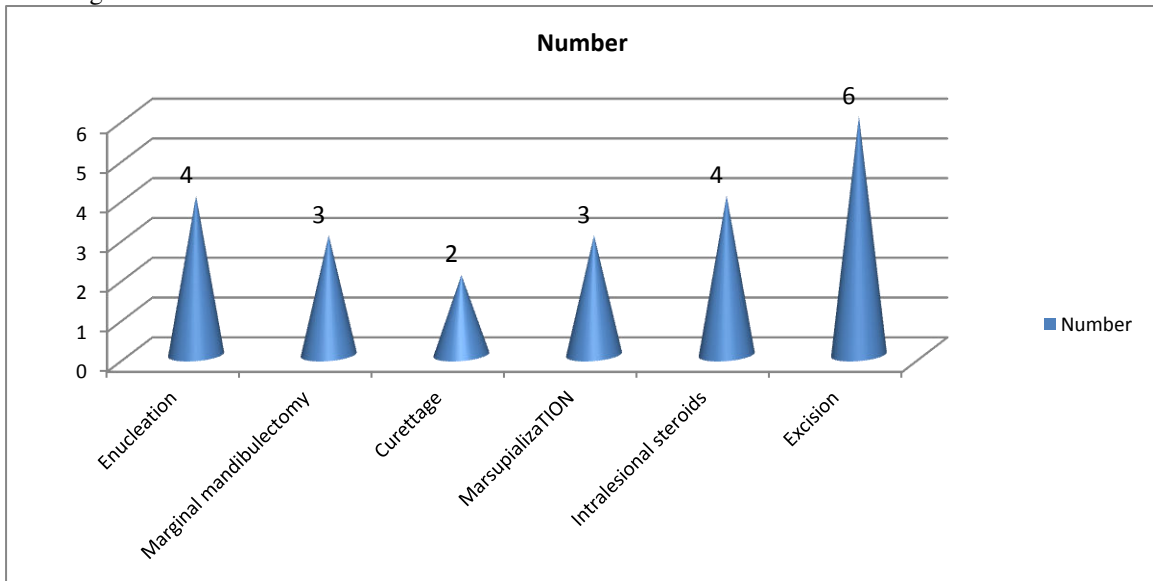
Table I shows that out of 22 cases, 14 were seen in males and 8 in females. The difference was significant (P- 0.05).

Graph I Distribution of lesions



Graph I shows that lesions were KCOT seen in 1 male and 1 female, radicular cyst in 1 male and 2 females, AOT seen in 2 males and 2 females, dentigerous cyst in 1 male and 1 female, ameloblastoma in 1 male and 1 female, CGCG in 2 males and 6 females and ossifying fibroma in 1 female. The difference was significant (P< 0.05).

Graph II Management of cases



Graph II shows that management includes enucleation (4), marginal mandibulectomy (3), curettage (2), marsupialization (3), intralesional steroids (4) and excision (6). The difference was significant (P< 0.05).

DISCUSSION

The word unilocular implies “single compartment”. Unilocularity can be seen in any lesion, but is rare in lesions that are more aggressive or in subtle lesions with superimposed infection. A unilocular radiolucency further exhibits different characteristics. The variations may be in the fill of radiolucency, borders, and influence on adjacent structures.⁵

The presence of various lesions in mandibular anterior region requires careful analysis. A cyst has an epithelial wall that expands due to fluid collection and expression of various cytokines. The occurrence of radicular cyst in this region shows the presence of carious lesions or trauma. The bone resorption follows path of least resistance making buccal plate more vulnerable to resorption. Slow expansion offers an opportunity to the overlying periosteum to form reactive bone and thus the cysts appear well- defined and exhibit corticated borders.⁶

An odontogenic keratocyst is a rare and benign but locally aggressive developmental cyst. It most often affects the posterior mandible. It most commonly presents in the third decade of life. Benign tumors that are subtle in their growth exhibit expansile resemblance to a cyst. This expansion is round/oval in three dimensions and resembles inflation of a balloon at slow pace. On the contrary, OKC tends to grow along the internal aspect of jaws which ensures that cyst reaches considerable size before cortices are expanded. The management of KCOT includes surgical excision, marsupialization ie. the surgical opening of the (OKC) cavity and a creation of a marsupial-like pouch, so that the cavity is in contact with the outside for an extended period and curettage.⁷

Sujata⁸ conducted a retrospective analysis of patients with anterior unilocular radiolucencies of mandible in young patients was done. There were a total of 17 patients. Their history and radiographs were reviewed from the case files and correlated with histopathological examination of the lesion. Nine different pathologies constituted the sample size of 17. A wide array of lesions was found to manifest similar signs and symptoms and radiographic findings namely ameloblastoma, adenomatoid odontogenic tumor, Odontogenic keratocyst, ossifying fibroma, idiopathic bone cavity, dentigerous cyst, radicular cyst, central giant cell granuloma, and calcifying odontogenic cyst.

In present study, out of 22 cases, 14 were seen in males and 8 in females. Lesions were KCOT seen in 1 male and 1 female, radicular cyst in 1 male and 2 females, AOT seen in 2 males and 2 females, dentigerous cyst in 1 male and 1 female, ameloblastoma in 1 male and 1 female, CGCG in 2 males and 6 females and ossifying fibroma in 1 female. This is in agreement with Eversole et al.⁹

The adenomatoid odontogenic tumor (AOT) is an odontogenic tumor arising from the enamel organ or dental lamina. We had 4 cases of AOT.

In this study, management included enucleation, marginal mandibulectomy, curettage, marsupialization, intralesional steroids and excision.

Mohamed et al¹⁰. concluded that most of AOT were round to oval and well demarcated. Haring et al¹¹ reported the incidence of unilocular OKC to be 73.3%. They also found that the mean size of unilocular lesion was about half that of multilocular lesion. Cohen and Hertzanu¹² in their series reported an incidence of 50% unilocular well defined lesions amongst cases of CGCGs.

CONCLUSION

Mandibular anterior unilocular lesions are not commonly encountered. The present study reported 22 cases, mostly in females. Management included enucleation, marginal mandibulectomy, curettage, marsupialization, intralesional steroids and excision.

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