

Distribution of Odontogenic Cyst in a Tertiary Care Hospital, Over a Period of One Year

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ABSTRACT

Aim: To present the data based on the reported cases, received, diagnosed and treated in a tertiary care hospital, over a period of one year.

Method: A total of 40 cases have been included in this study. These cases have been received, diagnosed and treated at the Fatima Memorial Hospital, Lahore over a period of one year. The clinical and demographic data has been recorded. The radiographical and histological analysis has been done to reach a conclusive diagnosis.

Results: Odontogenic cysts occur most commonly during the third decade of life. Age range is from 6 years to 68 years with the mean age of 29.6 years. It is more common among the males 24(60%) as compared to females 16(40%), male to female ratio is 1.5:1. Majority of the cystic lesions have been found within the mandible 30(75%) while 10(25%) of the lesions have been found in the maxilla.

Out of all the cases (n=40) included in the current study, odontogenic keratocyst 20(50%) is the most prevalent, the second most commonly found cystic lesion is periapical cyst 14(35%), dentigerous cyst accounts for 5(12.5%) while only one of the cases showed odontogenic keratocyst in combination with dentigerous cyst 1(2.5%).

Conclusion: This study serves as a source for providing data about the commonly occurring odontogenic cystic lesions involving the jaws with reference to its age, gender and site predilection. The data collected in this study has provided significant clinico-pathological information about all the reported cases to the pathologist and the clinician.

Keywords: Odontogenic cyst, tumour, radicular cyst, dentigerous cyst

INTRODUCTION

Cyst of the odontogenic origin is a destructing lesion which varies in its size. It can be inflammatory or epithelial, based upon its origin¹. Odontogenic cyst is a common finding in a dental clinic, the presenting complaint in case of such lesions is a clinically significant swelling of the gingival tissue, surrounding the tooth surface or it may present as a radiolucency surrounding the root of the offending tooth, when subjected to routine dental radiographs². Odontogenic keratocyst which was traditionally included in the list of developmental odontogenic cyst because of its aggressive, lytic behaviour and high rate of recurrence is now considered an odontogenic tumour according to the WHO classification, 2005³. Radicular cyst which is also known as periapical cyst is an inflammatory cyst that arises from the remnants of Hertwig's epithelial root sheath.⁴ Dentigerous cyst is a developmental odontogenic cyst of the jaws which is found in association with crown of an impacted tooth⁵.

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METHOD

Tissue samples have been collected for 40 cases diagnosed with cystic lesions involving the jaws which require surgical management, from the Oral and Maxillofacial Surgery Department at Fatima Memorial Hospital Lahore. Patient's demographic data has been recorded. Clinical and radiographical history has been collected for correlation with the histological findings in order to reach a conclusive diagnosis. These tissue biopsies are then subjected to conventional staining with Eosin and Haematoxyline and slides are observed under microscope. Diagnosis has been established with clinico-radiographical correlation and all the cases have been duly reported.

RESULTS

It has been found that cyst of the odontogenic origin has been a common finding and majority of the tooth associated lesions encountered in the oral and maxillofacial surgery department comprise of such cystic lesions. They can originate from the odontogenic epithelium or as a result of local periapical or peri-coronal inflammation. Age range is from 6 years to 68 years with the mean age of 29.6 years. Males 24(60%) are more commonly affected as compared to females 16(40%). The male to female

ratio is 1.5:1. Most of the 30(75%) cystic lesions have been found involving the mandible while 10(25%) lesions are present in the maxilla.

Out of all the cases (n=40) recruited for the current study, odontogenic keratocyst 20(50%) is found in most of the cases, the second most prevalent is periapical cyst 14(35%), dentigerous cyst accounts for 5(12.5%) while only one of the cases showed odontogenic keratocyst in combination with dentigerous cyst 1(2.5%).

DISCUSSION

The present study shows the odontogenic cysts to occur at a mean age of 29.6 years with an age range, from 6-68 years which is in accordance with a study done by Selvamani et al., 2012 in Indian population which also depicted a male to female ratio of 1.2:1 with a mean age of 28 years and an age range of 6–84 years. Another study done by Bataineh et al., in 2007 stated the male to female ratio of 1.7:1. The current study demonstrates odontogenic cyst to occur more commonly within the mandible 30(75%) as compared to maxilla 10(25%) this finding is again consistent with the findings reported by Jamshidi et al., 2015 and Shah et al., 2016 in their respective studies for the site predilection of odontogenic cysts.

Odontogenic keratocyst 20(50%) is the most commonly occurring cyst followed by the periapical cyst 14(35%) and later dentigerous cyst 5(12.5%) which is the third most commonly occurring odontogenic cystic lesion. Only one case showed odontogenic keratocyst in combination with dentigerous cyst 1(2.5%) in the present study. Most of the studies (Tortorici et al., 2008, Johnson et al., 2013) have shown periapical cyst to be the most prevalent followed by dentigerous cyst and later odontogenic keratocyst. This variation between the frequencies is due to the geographical distribution, difference between the sample size and the classification of odontogenic keratocyst to the list of odontogenic tumours by the WHO. Therefore it is needed to create a strong interdisciplinary balance where clinical, radiological, and histological findings may carefully be recorded and correlated to reach a conclusive diagnosis so that prompt management may be done against these lytic lesions.

CONCLUSION

This study has been a source for providing data about the commonly occurring odontogenic cystic lesions with reference to its age, gender and site predilection. The data collected and presented in this

study has provided significant clinico-pathological information which is of significance to the clinician and the pathologist.

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