



ODONTOMA WITHIN A DENTIGEROUS CYST IN MAXILLA -A RARE CASE REPORT

Maxillofacial Surgery

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ABSTRACT

odontoma is an asymptomatic slow-growing odontogenic tumor. It is usually found by chance in the maxilla or mandible on radiography, or when it deforms the adjacent teeth. It is commonly found in patients who are 30 years of age or younger. We report our encounter with an odontoma within a dentigerous cyst found incidentally in a 17 year-old male. He presented with abnormal fullness in the right upper buccal vestibular region. During the evaluation of the mass, we incidentally detected the odontogenic tumor within a dentigerous cyst in the patient's maxilla. Under local anesthesia, complete removal of the cystic mass was performed. Enucleation of the odontogenic tumor was done. The final diagnosis was odontoma. After 1 year of follow-up, there was no sign of recurrence of the tumor. In case of odontogenic tumors, even in old patients, it is important to suspect an odontoma. When odontoma accompanies a dentigerous cyst, surgical excisional biopsy should be performed to rule out malignancy. In case of a large bony defect after enucleation, autogenous bone grafting is essential for reconstruction.

KEYWORDS

Dentigerous cyst, Odontoma, Enucleation

INTRODUCTION:

Odontogenic tumors include ameloblastoma, keratocystic odontogenic tumor, adenomatoid odontogenic tumor, odontoma, calcifying cystic odontogenic tumor, myxoma, ameloblastic carcinoma, and primary intraosseous squamous cell carcinoma, among others [1]. Odontoma is one type of odontogenic tumors. It grows slowly, is asymptomatic, and is usually found in patients who have been treated for other oral conditions. It is commonly detected in patients who are 30 years of age or younger. However, if not treated adequately, it can result in deformity of the adjacent teeth, fractures, or any other damage to the jaw. It may also cause carcinomatous transformation according to its clinical characteristics. Hence, it is very important to treat odontomas. Here, we report a case of a 17 year-old male with an incidentally detected odontoma.

CASE HISTORY-

A 17 year-old male presented with a chief complaint of a growing mass on the right maxillary vestibular region from 12 to 14. It was soft and painless with a non-tender swelling (Fig-1). Orthopantomogram revealed a well-defined, thin-walled, non-enhancing, unilocular cystic lesion of 2*2 CM dimensions. There is an impacted canine from 13 (Fig-3). The radiolucency is surrounding the crown of impacted canine. It is also associated with radio opaque content within the radiolucency. There is a retained deciduous tooth from 53. The lesion was clinically diagnosed as a dentigerous cyst. Complete surgical enucleation of the cystic content and enucleation of the odontogenic tumor were performed under local anesthesia (Fig. 2).

The results from the histopathological examination revealed a structure resembling a single-rooted tooth (Fig. 4). The final diagnosis given was compound odontoma. There was no connection between the dentigerous cyst and the maxillary odontoma. After 1 year of follow-up, there were no signs of complications nor recurrence of the tumor. We obtained the patient's medical records and reviewed the related literature.



Fig1-pre op intraoral pic

fig-2 post enucleation of cyst

DISCUSSION-

Odontoma is a generally an asymptomatic lesion that is a casual finding in the course of routine radiologic studies. It is formed of enamel, dentin, cementum, and pulp tissue [2]. There are two types of odontomas according to the latest classification of the World Health Organization [1]. The compound odontoma is a radiopaque mass composed of multiple small calcified structures that are anatomically similar to normal teeth and are typically surrounded by a narrow radiolucent zone on radiography [2,4-6]. The complex odontoma is composed of an amorphous mass of calcified material that exhibits a radiodensity similar to that of teeth, and is surrounded by a narrow radiolucent rim on the radiograph. However, it does not anatomically resemble teeth [2,7]. In our case, a structure resembling a single-rooted tooth was observed on histopathological examination that aided in the diagnosis of compound type odontoma. Clinically, odontomas are either intraosseous or extraosseous. The intraosseous odontomas occur inside the maxilla or mandible, and may eventually erupt into the oral cavity. Peripheral odontomas arising from the extraosseous soft tissues are rare and have a tendency to exfoliate. Our patient had an intraosseous odontoma that did not erupt into the oral cavity [8].

Most odontomas occur in the first and second decades of life, especially among female patients. Odontomas are typically involved in delayed tooth eruption; thus, in children or adolescents with dental anomalies or jaw deformation, the possibility of odontoma must be investigated by radiography [2]. The diagnosis is usually based on routine radiography findings. Additional evaluation with CT is necessary to determine the type, features, and extension of the odontoma. In our case, the patient was 17 years of age and did not exhibit any dental anomaly or jaw deformation. The case substantially differs from the known characteristics of odontoma with the exception of incidental detection.



Fig 3-pre operative orthopantomogram



Fig 4- enucleated cystic content showing root like structures

Patients with odontoma do not usually exhibit symptoms, but odontoma may be found within cysts. The dentigerous cyst arises due to the accumulation of fluid between reduced enamel epithelium and crown of an unerupted tooth [9]. In these cases, it may cause displacement of erupting teeth or dysphagia, and may also lead to carcinomatous transformation. Normal odontomas are treated using conservative surgical enucleation, depending on the size and dentition problems. If not treated adequately, odontomas can lead to cyst formation and conversion to malignancies such as odontameloblastoma.

It is important to confirm the pathological diagnosis because ameloblastic odontoma and ameloblastic fibro-odontoma resemble common odontomas. On the other hand, the treatment of odontoma within a dentigerous cyst is very different. The most important factor in treatment is the age of the patient. There is no study reporting the exact age and the appropriate treatment method. In general, odontomas within dentigerous cysts in young children are less aggressive than those in adults, and therefore, marsupialization is preferred [9]. If the patient is older, an odontoma within a dentigerous cyst is thought to be aggressive, leading to significant jaw destruction, and requiring enucleation. In our case, the patient had no symptoms. However, the odontoma accompanying the dentigerous cyst carried the risk of jaw destruction or possible carcinomatous transformation. Hence, the patient was treated with enucleation.

CONCLUSION

In conclusion, when surgeons encounter a patient with an odontogenic tumor, even if the patient is younger or aged, it is important to suspect an odontoma. If the odontoma accompanies a dentigerous cyst, it can lead to carcinomatous transformation; thus, marsupialization or enucleation will be required.

REFERENCES

1. da Silva LP, de Paiva Macedo RA, Serpa MS, Sobral AP, de Souza LB. Global frequency of benign and malignant odontogenic tumors according to the 2005 WHO classification. *J Oral Diagn* 2017;2:e20170044.
2. Boffano P, Zavattero E, Roccia F, Gallesio C. Complex and compound odontomas. *J Craniofac Surg* 2012;23:685-8.
3. Zerener T, Sencimen M, Bayar GR, Kan B, Ayberk H, Arici G. Immediate reconstruction using autogenous bone graft in huge compound odontoma. *Oral Health Dent Manag* 2015;15:243-6.
4. Pacifici A, Carbone D, Marini R, Pacifici L. Surgical management of compound odontoma associated with unerupted tooth. *Case Rep Dent* 2015;2015:902618.
5. John JB, John RR, Punithavathy I, Elango I. Compound odontoma associated with maxillary primary tooth: a case report. *JIADS* 2010;1:49-51.
6. de Oliveira BH, Campos V, Marcal S. Compound odontoma: diagnosis and treatment: three case reports. *Pediatr Dent* 2001;23:151-7.
7. Pillai A, Moghe S, Gupta MK, Pathak A. A complex odontoma of the anterior maxilla associated with an erupting canine. *BMJ Case Rep* 2013;2013:bcr2013200684.
8. Shamaskin RG, Svirsky JA, Kaugars GE. Intraosseous and extraosseous calcifying odontogenic cyst (Gorlin cyst).