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Case Report

Dentigerous cyst in a child associated with multiple inverted supernumerary teeth: a rare occurrence

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Abstract: Background: Dentigerous cysts associated with supernumerary teeth are rare with most of them developing around a mesiodens in the anterior maxilla. Dentigerous cysts from multiple supernumerary teeth, especially with inverted tooth, are rare in other regions of the maxilla. Case report: We report a unique case of a dentigerous cyst in a child associated with multiple inverted supernumerary teeth and relevant review of literarature. Conclusion: Dentigerous cyst arising from multiple supernumerary teeth and not anterior maxillary mesiodens is quite uncommon. In a child, such findings associated with inverted tooth are still rare. Such cysts should be managed by excision as soon as possible.

Keywords: Dentigerous cyst, multiple supernumerary teeth, inverted teeth

Introduction

Dentigerous cysts associated with supernumerary teeth are rare and estimated to constitute 5-6% of all dentigerous cysts [1]. This was first described in 1923 by A.T.Pitts [2]. Most of them, about 90%, develop around a mesiodens in the anterior maxilla [3, 4]. Supernumerary tooth and dentigerous cysts are rare in other regions of the maxilla. At the same time, they are uncommon in children [5].

Case report

A 11 year old male child presented with a progressively enlarging painless swelling in the gums overlying left maxillary incisors and canine and the adjacent gingivobuccal sulcus for last 9 months (**Figure 1**). Clinical examination revealed a firm swelling fixed to the maxillary alveolus. There was no swelling in the hard palate. There were no signs of inflammation. Maxillary dentition was normal with no missing teeth. 3D Computed Tomography showed a big cystic lesion in the left maxilla, the superomedial margin extending almost upto the pyriform aperture and superiorly extending upto the infraorbital foramen. The cyst was overlying the lateral incisor, canine and the premolar with two teeth in the cyst cavity. One of the two teeth was vertically oriented and the other was lying more transversely and was inverted (**Figure 2**). Thus, a diagnosis of dentigerous cyst from multiple supernumerary teeth was arrived at. The patient was taken up for surgery under general anesthesia. The cyst was approached by an incision 5mm away from the upper gingivobuccal sulcus. The outer cortex was found to be paper thin. The bluish cyst was identified and excised. The excised specimen showed two teeth, one deeply embedded in the cyst and the other loosely attached to the cyst wall (**Figure 3** and **4**). Histopathology showing nonkeratinizing stratified squamous epithelium confirmed the diagnosis of dentigerous cyst. The patient did not have recurrence upto 9 months following surgery.

Discussion

Supernumerary teeth, or hyperdontia, are the existing of additional teeth to the normal series in the dental arches. It occurs with both primary and permanent teeth, but it is more common with permanent teeth. The rarest form of hyperdontia is the molar type. The incidence of hyperdontia ranges from 0.1% to 3.8% depending on the population and the type of dentition. The

Figure 1. Cystic lesion in left maxillary alveolus.

Figure 2. 3D Computed Tomography showing a big cystic lesion in the left maxilla, extending almost upto the pyriform aperture and the infraorbital foramen. The upper tooth, near the infraorbital foramen seen inverted.

Figure 3. Excised cyst showing two teeth with one of them inverted.

incidence of supernumerary teeth in the primary dentition is 0.2-0.8% and in the permanent

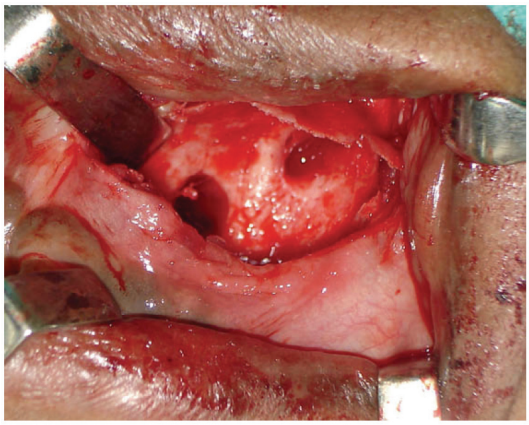

Figure 4. A post excision view of the maxilla showing two sockets.

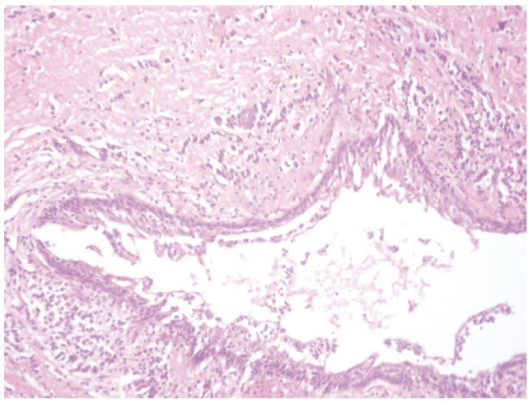

Figure 5. Dentigerous cyst lined by nonkeratinizing stratified squamous epithelium.

dentition is 1.5-3.5% [6]. In a series of 487 patients, Liu et al using Conical Beam Computed Tomography found 1 supernumerary tooth in 72 %, 2 in 27.3%, and 3 in 0.6% of patients. Computed Tomography yielded accurate 3-dimensional pictures of the dental and bony structures. Moreover, 43.4% of the premaxillary supernumeraries were inverted and 21.1% were transversely oriented [7].

Dentigerous cyst is a developmental odontogenic cyst, which apparently develops by accumulation of fluid between reduced enamel epithelium and the tooth crown of an unerupted or impacted tooth [1]. They are usually found in second or third decade of life. They are rather rare in children [5]. About 95% of dentigerous cysts involve the permanent dentition and only 5% are associated with supernumerary teeth [3]. Studies show that about 6% of supernumerary teeth may develop dentigerous cyst [8].

Those associated with inverted and multiple supernumerary teeth are extremely rare. About 90% of dentigerous cysts from supernumerary teeth develop around a mesiodens in the anterior maxilla and they present as palatal swellings [3, 4]. Those in other regions of the maxilla are rather rare.

Dentigerous cysts are painless swellings and may grow to assume a big size. Clinical diagnosis may be confused with other types of odontogenic cysts. Histopathology of the excised specimen confirms the diagnosis.

Management of a supernumerary tooth usually warrants its removal, especially when associated with definite pathology [9]. Dentigerous cyst is optimally treated by excision.

In this article, we report a case of dentigerous cyst in a child, associated with multiple maxillary supernumerary teeth with one inverted and oblique tooth. These rare findings, all in the same patient, makes it interesting and worth reporting. A possibility of coalescence of two dentigerous cysts cannot be ruled out.

Conclusion

Dentigerous cyst arising from multiple supernumerary teeth and not anterior maxillary mesiodens is quite uncommon. In a child, such findings associated with inverted tooth are still rare. Such cysts should be managed by excision as soon as possible.

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References

[1] Chung WL, Cox DP, Ochs MW. Odontogenic Cysts, Tumors and Related Jaw Lesions. In Head and Neck Surgery – Otolaryngology. 4th Edition. Lippincott Williams and Wilkins 2006; 1569-1584.

[2] Pitts AT. Dentigerous Cyst Apparently Associated with a Supernumerary Tooth. Proc R Soc Med 1924; 17(Odontol Sect): 9–10.

[3] Dinkar AD, Dawasaz AA, Shenoy S. Dentigerous cyst associated with multiple mesiodens: A case report. J Indian Soc Pedod Prev Dent 2007; 25: 56-59.

[4] Lustmann J, Bodner L. Dentigerous cyst associated with supernumerary teeth. Int J Oral Maxillofac Surg 1988; 17: 100-102.

[5] Shetty R, Sandler J. Keeping your eye on the ball. Dent Update 2004; 31: 398-402.

[6] Gardner DG, Corio RL. Plexiform unicystic ameloblastoma: a variant of ameloblastoma with a low recurrence rate after enucleation. Cancer 1984; 53: 1730-1735.

[7] Liu D, Zhang W, Zhang Z, Wu Y, Ma X. Three-dimensional evaluations of supernumerary teeth using cone-beam computed tomography for 487 cases. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2007; 103: 403-411.

[8] Kessler HP, Kraut RA. Dentigerous cyst associated with an impacted mesiodens. Gen Dent 1989; 37: 47-49.

[9] Garvey MT, Barry HJ, Blake M. Supernumerary teeth: an overview of classification, Diagnosis and Management. J Canad Dent Assoc 1999; 65: 612-616.