ORIGINAL RESEARCH PAPER

Volume-7 | Issue-8 | August-2018 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

COMPOUND ODONTOMA - A DENTAL HAMARTOMA ASSOCIATED WITH IMPACTED CANINE

Dental Science

Dr.P.Manasa* Post Graduate, Mds In Oral Medicine And Radiology, Meghna Institute Of Dental Sciences, Nizamabad, Telangana, India *Corresponding Author

Dr.N.Ramesh Post Graduate, Mds In Orthodontics And Dentofacial Orthopaedics, Meghna Institute Of Dental Sciences, Nizamabad, Telangana, India.

ABSTRACT

Odontoma is a hamartomatous lesion of odontogenic origin involving both epithelial and mesenchymal tissues. These odontogenic tumors are composed of enamel, dentine, cementum, and pulp tissue. Odontomas are usually diagnosed during the routine radiographic examination. Sometimes these tumors are associated with delayed tooth eruption, impaction, or primary tooth retention. Here we report a case of compound odontoma in a 17-year-old girl that has caused the delayed eruption of maxillary canine.

KEYWORDS

Maxilla, Impacted Teeth, Odontoma

INTRODUCTION

Odontomas are benign tumors of odontogenic origin combining mesenchymal and epithelial elements [1]. The term odontoma was first coined by Paul Broca (1866). He defined odontomas as a tumor formed by an overgrowth of complete dental tissues. According to the recent literature, odontoma is considered to be a hamartomatous malformation rather than true neoplasm [2].

Odontomas are usually asymptomatic, and they may be detected by chance on a routine radiograph. Clinical signs suggestive of an odontoma include a retained deciduous tooth or an impacted tooth [3,4].

According to the WHO classification, a complex odontoma is a malformation in which all the dental tissues are represented, individual tissues being mainly well formed but occurring in a more or less disorderly pattern; where as a compound odontoma is a malformation in which all the dental tissues are represented in a more orderly pattern than in the complex odontoma so that the lesion consists of many tooth like structures. Compound odontomas are usually seen in the anterior region of the maxilla, over the crowns of unerupted teeth or between the roots of erupted teeth. Complex odontomas are mostly seen in the mandibular posterior region [5].

Histologically, odontomas are composed of enamel, dentine, cementum and, in some cases, pulp tissue which do not exhibit a normal relation to each other. The connective tissue capsule around the odontoma is similar to the follicle surrounding the normal tooth. Ghost cells are seen in 20% of the cases [6]. Surgical removal is the treatment of choice of both complex and compound odontomas. Follow-up is essential for evaluation of further development of the permanent dentition at the removal location.

CASE REPORT

Here in we present a female patient of age 17years who visited to the department of oral medicine and radiology with a chief Complaint of forwardly placed upper front teeth since childhood. Patient gave history of forwardly placed upper front teeth since childhood and had problem with esthetics so wants to get them corrected. Her medical and family history was not contributory.

On Intra oral examination angles class I molar relation was seen on right and left sides with proclined upper anteriors and increased over jet. Missing irt 13 and retained deciduous irt 53 (figure 2) were seen. A solitary swelling was noticed in the region of 53 14 (figure 1) measuring approx. 0.5cmsx0.5cms which was circular in shape with smooth surface extending anteroposteriorly from distal aspect of 53 to mesial aspect of 14, with well-defined borders. No visible pulsations. No secondary changes seen. On palpation the swelling was hard in consistency, non-tender, no pulsations, non-fluctuant, non-compressible, no other secondary changes seen.

Fig 1 showing bulge in the vestibule

Fig 2 showing retained deciduous tooth

Based on history and clinical examination, the provisional diagnosis of angles class I malocclusion with increased over jet and impacted tooth irt 13 was given. A differential diagnosis of supernumerary tooth, odontoma was given.

Intraoral periapical radiograph revealed a well-defined radio-opaque mass similar to the density of dental tissue (figure 3). It was located in the anterior maxilla in association with the crown of an unerupted canine. The borders were well defined and smooth and had a cortical border and immediately inside and adjacent to the cortical border is a soft tissue capsule. The internal structure was mixed radiopaque radiolucent with deposits of dentin, enamel, enamel matrix, cementum, and pulp tissue arranged in well organized relationship. Occlusal radiograph and orthopantamogram also revealed the same (figure 4 and 5).

Another radiograph was taken by shifting the X-ray tube to more left side to know the position of odontoma (tube shift technique). The radio-opaque mass moved to the opposite side which confirmed its labial position. Histology showed a mass of tooth-like structure made up of dentin, enamel matrix, pulp. Thus correlating the clinical, radiographic and microscopic findings, the diagnosis of compound odontoma was made.

Removal of odontoma was done by the surgical procedure under local anesthesia. The lesion was containing tooth like small structure (Figures 6 and 7). All of the hard tissue was removed and the cavity was curetted. The sharp bony edges were removed using bone rontger and smoothened with a bone file and Sutures were placed.

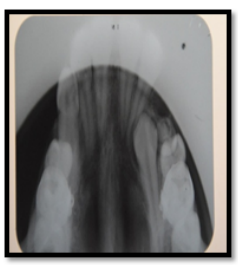

Fig 3 intra oral periapical radiograph **Fig 4 occlusal radiograph**

Fig 5 orthopantamogram

Fig 6 surgical removal of odontome

Fig 7 specimen of odontome

It is very common for children to present with a difference in eruption pattern of maxillary canines. Because of esthetic reasons, many patients come for treatment. Early diagnosis, thorough knowledge and an excellent evaluation of X-ray documents are essentials to prevent, later craniofacial developmental complications. Early removal of the lesion will enhance the eruption. Usually, odontomas does not recur, but close monitoring is necessary in young children till permanent teeth erupt into normal occlusion.

References

1. Serra-Serra G, Berini-Aytés L, Gay-Escoda C. Erupted odontomas: A report of three cases and review of the literature. Med Oral Patol Oral Cir Bucal 2009;14:E299-303.
2. Budnick, S.D. (1976) Compound and complex odontoma. Oral Surgery, Oral Medicine, Oral Pathology, 42, 501-505. Doi: 10.1016/0030-4220(76)90297-8
3. Nelson BL, Thompson LD. Compound odontoma. Head Neck Pathol. 2010; 4:290–1.
4. An S, An C, Choi K. Odontoma: a retrospective study of 73 cases. Imaging Sci Dent. 2012; 42:77–81.
5. Takeda, Y. and Tomich, C.E. (2005) Ameloblastic fibroodontoma. In: World Health Organization Classification of Tumors (WHO). International Agency for Research on Cancer, IARC Press, Lyon, 309.
6. Cohen DM, Bhattacharyya I. Ameloblastic fibroma, ameloblastic fibroodontoma, and odontoma. Oral Maxillofac Surg Clin North Am 2004; 16(3):375-384.