

Erupted odontome associated with a primary molar: A unique clinical presentation, 4-year follow-up

Shaik Hasanuddin, E Rajendra Reddy¹

Department of Pedodontics and Preventive Dentistry, Government Dental College and Hospital, Hyderabad, ¹Department of Pedodontics and Preventive Dentistry, Kamineni Institute of Dental Sciences, Nalgonda, Telangana, India

Abstract

Erupted odontomas occur very rarely in both the primary and permanent dentitions. The present case report discusses an unusual erupted odontome associated with a primary first mandibular molar. A 7-year-old female patient with an erupted odontome in the oral cavity was reported. The surgical extraction of odontome was performed under local anesthesia to allow eruption of underlying premolar tooth. After 4 years of follow-up, the first premolar had erupted with an unusual occlusal morphology, similar to that of a primary first molar. Orthopantomogram revealed no supplemental/supernumerary teeth in the vicinity of the erupted tooth. Early evaluation, precise diagnosis of odontogenic lesions interfering with erupting teeth, especially in the first decade of life is essential for prevention of malocclusion in young children. Erupted permanent successor should be differentiated from a primary first molar to avoid unnecessary extraction.

Keywords: Odontogenesis, odontomas, pediatric oral pathology

Address for correspondence: Dr. Shaik Hasanuddin, Department of Pedodontics and Preventive Dentistry, Government Dental College and Hospital, Hyderabad, Telangana, India.

E-mail: dr.hasan.shaik@gmail.com

Received: 16.02.2017, **Accepted:** 22.07.2017

INTRODUCTION

The term “odontoma” by definition refers to any tumor of odontogenic origin. Odontomas are developmental anomalies resulting from the growth of completely differentiated epithelial and mesenchymal cells that give rise to functional ameloblast and odontoblast. Odontomas represent a hamartomatous malformation rather than a neoplasm.^[1] They are benign tumors, slow-growing and show nonaggressive behavior.^[2] Erupted odontomas occur very rarely in both the primary and permanent dentition. The eruption of an odontome in relation to a primary tooth is very rare. Clinically, odontomas are often associated with alteration in permanent or temporary tooth eruption. The diagnosis is established by routine radiographical

examination or on the evaluation of the cause of delayed eruption.^[3] The aim of this paper is to discuss only an erupted odontome in the first decade of life associated with a primary first molar erupted into the oral cavity.

CASE REPORT

A 7-year-old female patient has come to the Department of Pedodontics and Preventive Dentistry with a complaint of pain and food impaction in the lower back teeth on both sides, for a month. The pain was of constant nature and aggravated on mastication.

Routine clinical examination revealed dental carious lesions in the mandibular molar teeth on both sides. In addition to

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

How to cite this article: Hasanuddin S, Reddy ER. Erupted odontome associated with a primary molar: A unique clinical presentation, 4-year follow-up. *J Oral Maxillofac Pathol* 2017;21:322.

Access this article online

Quick Response Code:



Website:

www.jomfp.in

DOI:

10.4103/jomfp.JOMFP_230_16

the carious teeth, there was an unusual tooth like structure in the left primary first molar region. The typical coronal portion of the tooth is surrounded by a white-colored globule of tooth material circumferentially and extending below the gingival margin. The gingival aspect of this tooth structure extended below the cervical area [Figures 1 and 2]. The gingival area under the odontome was inflamed and edematous. The patient revealed a history of a slow growing and slowly erupting tooth-like structure during the past 6 months. Orthopantomogram (OPG) revealed a radiopaque mass overlapping the tooth crown, giving it an irregular shape. The permanent premolar tooth bud appeared normal under the tooth-like mass. Informed consent was taken from the patient and parent of the child, and the positive outcomes of the treatment were explained to the parent before the surgical extraction of odontome.

The carious molar teeth were treated by placing resin-based fissure sealants and glass ionomer cement restorations followed by surgical extraction of the odontome-like structure [Figure 3]. The extracted specimen was sent for histological evaluation [Figure 4]. The lesion surrounding the primary molar tooth was sectioned and evaluated, which revealed normal enamel and dentine without any pulpal tissue signifying the extra mass of tooth structure attached to coronal portion of the primary molar. Basing on the clinical, radiographic and histological evaluation the lesion was diagnosed as an erupted compound odontome because of the well-structured anatomic tooth attached with the lesion.

Follow-up

After 3 years of follow-up, there was a fibrous thickening of the mucosa at the site of extraction of the odontome and the vestibular region. There was no sign of eruption of the permanent first premolar tooth, though the contra lateral premolar on the right side was erupted [Figure 5]. At the end of 4th year, the permanent first premolar finally erupted with an unusual occlusal morphology resembling the occlusal table of primary first molar [Figure 6]. OPG revealed no supplemental/supernumerary teeth in the vicinity of the erupted tooth. A sharp contact point with the adjacent canine is evident in the OPG [Figure 7].

DISCUSSION

Few case reports have been reported on odontomas in pediatric dentistry in the second and third decades of life. This case report discusses an erupted odontome in the first decade. Odontomas attached to the primary molars circumferentially and erupting into the oral cavity are very rare. The first case of an erupted odontoma was

described in 1980 by Rumel *et al.* and since then only few cases of erupted odontomas in pediatric dentistry have been reported till date.^[4] An exceptional circumstance is a spontaneous eruption of an odontoma into the oral cavity, i.e., exposure of the tumor through the oral mucosa. This situation can cause pain, inflammation of the adjacent soft tissues or infection associated with suppuration.^[5-7] In the present case, the odontoma has erupted into the oral cavity slowly and had caused pain and gingival inflammation.

Clinical indicators of odontoma may include retention of deciduous teeth, noneruption of permanent teeth, pain, expansion of the cortical bone and tooth displacement. Other symptoms include anesthesia in lower lip and swelling in the affected area.^[8] In the present case, eruption of permanent premolar was prevented by the fibrous thickening of the mucosa or an inherent incapability of the tooth bud to erupt due to the lack of eruptive forces. Impaction or altered eruption in case of permanent successors associated with odontomas occur because the odontoma obstructs the eruptive trajectory of the teeth.^[8-11] The main issue with an erupted odontome in a child is the difficulty to maintain proper oral hygiene due to accumulation of debris and plaque in the vicinity of the odontome.

The differential diagnosis for the present case comprised of gemination, fusion with the underlying permanent premolar tooth or a supernumerary tooth fused with the primary mandibular left first molar. An erupted odontome is often confused with a case of gemination or fusion with the permanent predecessor. Gemination is a condition where a single tooth with a completely or incompletely bifid crown with a single root and root canal. The normal complement of the teeth is present.^[1] In fusion clinical appearance depends on the stage of tooth bud formation when they are fused. The normal complement of teeth may not be present.^[1] In the present case, the normal complement of teeth was present.

There is no general agreement on the best management approach for impacted teeth associated with odontomas. The treatment options comprise surgical extraction, fenestration, posterior orthodontic traction or simple observation with periodic clinical and radiographical controls, to evaluate the course of these teeth.^[10,12,13] In the present case, we have adopted a wait and watch approach to let the permanent premolar erupt on its own. It took 4 years for the permanent first premolar to erupt in the oral cavity.

Finally, we conclude that a clinician can never be sure about the eruption of permanent predecessor at its actual time



Figure 1: The clinical picture showing the erupted odontome attached circumferentially to the left mandibular primary first molar and extending below the gingival margin in direct vision



Figure 2: The clinical picture showing the mirror image of erupted odontome attached circumferentially to the left mandibular primary first molar and extending below the gingival margin



Figure 3: The clinical picture showing the surgical removal of erupted odontome with a periosteal elevator



Figure 4: The picture shows the specimen of extracted erupted odontome held with a toothed forcep



Figure 5: The picture shows the eruption of the first premolar on the contralateral side of the same arch and noneruption of the premolar on the extracted erupted odontome side



Figure 6: The picture shows the eruption of an unusual first premolar on left side of the arch, whose occlusal table is morphologically similar to primary first molar after 4 years of follow-up (mirror image)

after extraction of an erupted odontome. The clinicians should be aware of such cases to avoid unnecessary extraction of such permanent teeth without proper

evaluation, as they morphologically resemble primary first molars. An early evaluation, precise diagnosis of



Figure 7: Orthopantomogram taken after 4 years of follow-up reveals no supernumerary or impacted tooth in relation to the erupted first premolar and a sharp contact area of the premolar with the adjacent canine

odontomas interfering with erupting teeth is essential for prevention of malocclusion in young children.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Shafer WG, Hine MK, Levy BM. A Textbook of Oral Pathology. 4th ed. Philadelphia: W.B. Saunders Company; 1983. p. 308.

2. Neville BW, Damm DD, Allen CM, Bouquot JF. Odontogenic cysts and tumors. In: Oral and Maxillofacial Pathology. 2nd ed. Philadelphia (PA): W.B. Saunders; 2002. p. 631-2.
3. 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.
4. Rumel A, de Freitas A, Birman EG, Tannous LA, Chacon PT, Borkas S, *et al*. Erupted complex odontoma. Report of a case. *Dentomaxillofac Radiol* 1980;9:5-9.
5. Ferrer M, Silvestre F, Estelles E, Grau D. Recurrent infection of a complex odontoma following eruption in the mouth. *Med Oral* 2001;6:269-75.
6. Junquera L, de Vicente JC, Roig P, Olay S, Rodríguez-Recio O. Intraosseous odontoma erupted into the oral cavity: An unusual pathology. *Med Oral Patol Oral Cir Bucal* 2005;10:248-51.
7. Litonjua LA, Suresh L, Valderrama LS, Neiders ME. Erupted complex odontoma: A case report and literature review. *Gen Dent* 2004;52:248-51.
8. Vengal M, Arora H, Ghosh S, Pai KM. Large erupting complex odontoma: A case report. *J Can Dent Assoc* 2007;73:169-73.
9. Ragalli CC, Ferreria JL, Blasco F. Large erupting complex odontoma. *Int J Oral Maxillofac Surg* 2000;29:373-4.
10. Frank CA. Treatment options for impacted teeth. *J Am Dent Assoc* 2000;131:623-32.
11. Ozeç I, Kiliç E, Yeler H, Göze F, Yeler D. Large complex odontoma associated with a primary tooth. *Quintessence Int* 2007;38:521-4.
12. Katz RW. An analysis of compound and complex odontomas. *ASDC J Dent Child* 1989;56:445-9.
13. Liu JK, Hsiao CK, Chen HA, Tsai MY. Orthodontic correction of a mandibular first molar deeply impacted by an odontoma: A case report. *Quintessence Int* 1997;28:381-5.