

**International Journal of Innovative Research in Science,
Engineering and Technology**

(An ISO 3297: 2007 Certified Organization)

Vol. 2, Issue 10, October 2013

Erupted Complex Odontome – A case report

Dr. Shweta Mishra¹, Dr. Anita Munde², Dr. Safia Shoeb³, Dr. Sunil Sahuji⁴, Dr. Pranali Wankhede⁵

P.G. Student, Department of oral Medicine and Radiology, Rural Dental College, PIMS, Loni, Maharashtra, India¹

Professor, Department of oral Medicine and Radiology, Rural Dental College, PIMS, Loni, Maharashtra, India²

H.O.D & Professor, Department of oral Medicine and Radiology, Rural Dental College, PIMS, Loni, Maharashtra, India³

Professor, Department of oral Medicine and Radiology, Rural Dental College, PIMS, Loni, Maharashtra, India⁴

Senior lecturer, Department of oral Medicine and Radiology, Rural Dental College, PIMS, Loni, Maharashtra, India⁵

Abstract: Odontomas are the commonest hamartomas as well as odontogenic tumor. They are a malformation in which dental tissues are represented in more or less disorderly pattern. They prevent the eruption of the teeth and mostly asymptomatic in nature. Usually they are discovered on routine radiographic examination. The odontomas which erupt in oral cavity are called as erupted odontomas and are rare in nature. This paper focuses on another case of erupted complex odontoma which adds on to the previous mentioned erupted odontomas in the literature.

Keywords: erupted, odontoma, odontogenic tumor.

I. INTRODUCTION

The term odontome by definition alone refers to a tumor of odontogenic origin consisting of mesenchymal and epithelial dental elements. Histologically, they are composed of different dental tissues, including enamel, dentine, cementum and, in some cases, pulp tissue.^{2,3}

According to WHO classification odontomes can be divided into three groups.

- Complex odontome: When the calcified dental tissues are simply arranged in an irregular mass bearing no morphologic similarity to rudimentary teeth.
- Compound odontome: Composed of all odontogenic tissues in an orderly pattern that result in many teeth-like structures, but without morphologic resemblance to normal teeth.
- Ameloblastic fibro-odontome: Consists of varying amounts of calcified dental tissue and dental papilla-like tissue, the later component resembling an ameloblastic fibroma. The ameloblastic fibro-odontome is considered as an immature precursor of complex odontome.⁴

When a comparison is made between the occurrence rate of compound and complex odontome then usually the former is twice as common than the latter.²

The purpose of this report is to add on to the rare entity of erupted complex odontome in the existing literature and thereby discuss the clinical, radiological and histopathological evidence which supported this case.

II. CASE REPORT

A 20-year-old female reported to the Department of Oral Medicine and Radiology with the chief complaint of pain in upper left posterior region of the jaw since two days. Pain was spontaneous in onset, dull, intermittent, nonradiating, aggravates on chewing and relieved by itself after few minutes. Extraoral examination was unremarkable. Intraoral examination revealed a partially erupted yellowish colored hard mass of approximate size 1.5 x 2 cm on the alveolar ridge distal to left maxillary first molar. Maxillary second and third molar were missing. The surrounding mucosa was noninflamed and there was no evidence of pus discharge or draining sinus with the same. On palpation the mass was bony hard in consistency and there was no expansion with either buccal or lingual cortical plate (Fig 1).

Radiographic examination (IOPA, maxillary occlusal and panoramic) (Fig 2a,2b,2c) revealed an impacted maxillary 2nd molar on the left side with an ill defined radiopacity with slightly greater density than the bone present with the coronal aspect of the same. Internal structure revealed radiopacity with trabecular pattern. Maxillary third molar was

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 2, Issue 10, October 2013

missing. The radiopaque mass was surrounded by a radiolucent halo which in turn had a well corticated border outside.

Considering the clinical and radiographic presentations, a diagnosis of erupted complex odontomas was determined. Under local anesthesia the access to the mass was achieved through an intraoral approach and odontome was extracted (Fig 3a,3b) and subjected to histopathological examination which confirmed the diagnosis of complex odontoma. Patient was kept under observation. Post operative follow up was done after 6 months which showed normal eruption pattern of left maxillary 2nd molar teeth. (Fig 4a,4b).

III. DISCUSSION

The term “Odontoma” was coined by Paul Broca in 1867.¹ It is the commonest hamartoma and odontogenic tumor which constitutes for 22 % of all odontogenic tumors of the jaw.

The WHO classification defines Complex odontome as “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 ”^{5,6} as well as compound odontome which consists of multiple well formed teeth or denticles.

There are many etiologies of odontome formation but mostly odontomas have been associated with trauma during primary dentition, inflammatory and infectious processes, hereditary anomalies (Gardner syndrome, Hermann's syndrome).⁷ It has slight predilection in males with M : F ratio varies between 1.5 : 1 and 1.6 : 1.

Mainly odontomas in anterior segment of jaw are compound composite in type (61%) whereas the majority in posterior segment are complex composite type.⁸ Many authors have given varied types of odontomas like compound, complex, Dilated, hybrid, Geminated & Cystic.^{4,8,3,9} Odontomas are also classified as intraosseous and extraosseous odontomas. Erupted odontomas are rare and quite infrequent in literature.⁴

The first case of erupted odontoma was deciphered by Rumel et al in 1980. In the year 2009 Gabriel Serra Serra et al described three cases before which only 17 cases of erupted odontomas were reported in the literature. These concluded almost 20 cases altogether.² In 2010 Avinash et al. and Chandra et al. came up with another two cases of erupted odontomas.^{7,4} Further in 2011 Nisha et al documented one more case followed by another case by Dawasaz Ali zahar et al in 2012.^{1,5} Out of previous 24 cases, 13 cases were of complex odontome and 11 cases were of compound odontome. Also out these 24 cases, 9 were male and 14 were female and in one case no age and sex were presented. The mean age of the patient was 20-25 yrs. We here have a rare case of erupted complex odontome which was erupted in the left posterior maxilla.

These are usually asymptomatic lesions, but sometimes their eruption in the oral cavity may give rise to pain, inflammation and infection as well as they are associated to alterations in permanent or temporary tooth eruption.² Impaction and/or altered eruption occurs because the odontoma obstructs the eruptive trajectory of the teeth. Our case here presented with pain and roughness with the affected area.

The mechanism of odontoma eruption appears to be different from tooth eruption because of the lack of periodontal ligament and root in odontoma. The force required to move the teeth is the contractility of the fibroblasts, which is absent in case of odontomas. Although there is no root formation in odontoma, its increasing size may lead to the sequestration of the overlying bone and, hence occlusal movement or eruption with increasing size over time produces a force sufficient to cause bone resorption.¹

Differential diagnosis may include other opaque jaw lesions like cement-ossifying fibroma, osteoma etc .^{10,8}

The treatment protocol comprises of surgical extraction, fenestration & posterior orthodontic traction or simple observation with periodic clinical and radiological controls, to evaluate the course of these teeth. In our patient surgical extraction was performed and patient was kept under observation for evaluation of the normal eruption of the 2nd maxillary molar in the oral cavity.



Fig 1: Intraoral view showing yellowish bony hard lesion distal to maxillary 1st molar of the left side.

**International Journal of Innovative Research in Science,
Engineering and Technology**

(An ISO 3297: 2007 Certified Organization)

Vol. 2, Issue 10, October 2013

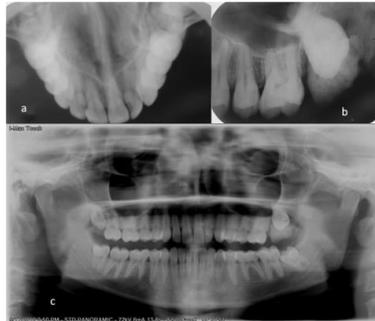


Fig 2a, 2b, 2c: An IOPA, maxillary cross-sectional occlusal view & OPG showing a radiopaque lesion surrounding the crown of impacted maxillary 2nd molar on the left side.

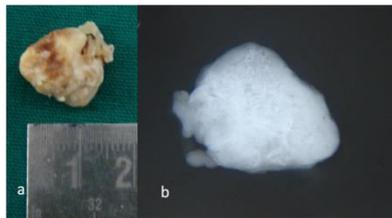


Fig 3a, 3b: Excised specimen along with the radiograph of complex odontome.

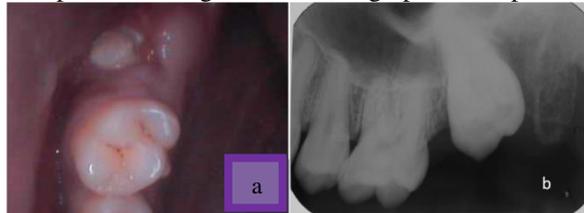


Fig 4a, 4b: postoperative clinical photograph and IOPA of the same after 6 months showing the erupting maxillary 2nd molar.

IV. CONCLUSION

This paper presented case of erupted complex odontoma which is rare in nature as odontomas infrequently erupt in the oral cavity. The extraction was carried out with the odontoma and patient was kept under observation for evaluation of the affected tooth.

REFERENCES

1. Dua Nisha, Kapila Rishab, Trivedi Ashwarya, Mahajan Sukriti, SD Gupta. An unusual case of erupted composite complex odontoma. Journal of Dental Science and Research. September. Vol 2(2): p. 1-5. 2011
2. Gabriel Serra-Serra, Leonardo Berini-Aytes, Cosme Gay-Escoda. Erupted Odotomas: A report of three cases and review of the literature. Med Oral Pathol Oral Cir Bucal. Vol 14(6): p. E299-303. 2009
3. Shafer.Hine and Levy. A textbook of oral Pathology. 5th ed. Elsevier , editor.; 2003.
4. Sunira Chandra, Anjana Bagewadi, Vaishali Keluskar, Kunal Sah. Compound composite odontome erupting into the oral cavity: A rare entity. contemporary clinical dentistry. Vol 1(2): p. 123-126. 2010
5. Dawasaz Ali Azhar, Mohammad Zahir Kota, Sherif EL_Nagdy. An unusual erupted complex composite odontoma:A rare case. Case Reports in Dentistry. p. 1-4. 2013
6. C.C.Ragalli, J.L.Ferreria, F.Blasco. Large erupting complex odontoma. International journal of Oral and Maxillofacial Surgery. Vol 29: p. 373-374. 2000
7. Avinash Tejasvi M.L, Balaji Babu.B. Erupted Compound Odontomas:a Case Report. Journal of Dental Research , dental Clinics, Dental Prospects. Vol 5, p. 33-36. 2011
8. Stuart C White & Michael.J.Pharaoh. Oral Radiology Principles and Interpretation. 6th ed. Elsevier M, editor.

**International Journal of Innovative Research in Science,
Engineering and Technology**

(An ISO 3297: 2007 Certified Organization)

Vol. 2, Issue 10, October 2013

9. Robert P Langlais, Olaf E. Langland, Christoffel.J.Nortje. Diagnostic Imaging of the jaws: William and Wilkins; 1995.
10. IIKer Ozec, Erdem Kilic, Hasan Yeller, Fahrettin Goze, Defne Yeler. Large complex odontoma associated with a primary tooth. Quintessence International. Vol 38(6), p. 521-524, 2007

BIOGRAPHY



I am **Dr.Shweta Mishra**, 3rd year PG student from Dept of Oral Medicine and Radiology, RDC,PIMS,Loni. I am pursuing My MDS in the same college and is my last year. I have keen interest in writing articles related to my field and exploring new dimensions in the cases.