

Case report

## Embedded Tooth - Radiographic Images and Case Report

Dr. Mohd Saalim<sup>1</sup>, Dr. Freny R Karjodkar<sup>2</sup>, Dr. Kaustubh Sansare<sup>3</sup>,  
Dr. Sneha Sharma<sup>1</sup>, Dr. Archana Mehra<sup>1</sup>, Dr Satyapal Johaley<sup>1</sup>

<sup>1</sup>PG Resident, <sup>2</sup>Professor, <sup>3</sup>Associate Professor,  
Oral Medicine and Radiology, Nair Hospital Dental College, Mumbai, India

Corresponding Author: Dr. Mohd Saalim

### ABSTRACT

Teeth that are not erupted completely or erupted partially may be due to one of the cause that is lack of space or loss of eruptive force or ankylosis. The teeth which are not erupted because of lack of space or any obstruction in their path of eruption are called impacted, those which are not erupted because of lack of eruptive force are called embedded and those are not erupted fully because of ankylosis are called submerge teeth. Here we reported a case of embedded tooth. The purpose of this report is to provide radiographical pictures of embedded tooth that will allows better understanding of the topic embedded tooth because no book has pictorial presentation of embedded tooth as best of my knowledge.

**Key Words:** Embedded tooth, unerupted tooth, impacted tooth, radiographic image.

### INTRODUCTION

Teeth that are not erupted completely or erupted partially may be due to one of the cause that is lack of space or loss of eruptive force or ankylosis. The teeth which are not erupted because of lack of space or any obstruction in their path of eruption are called impacted, those which are not erupted because of lack of eruptive force are called embedded and those which are not erupted fully because of ankylosis are called submerge teeth. Here we reported a case of embedded tooth. The purpose of this report is to provide radiographical pictures of embedded tooth that will allows better understanding of the topic embedded tooth because no book has pictorial presentation of embedded tooth as best of my knowledge.

### CASE REPORT

A 17- year old female patient was reported to OPD with the complain of pain on lower left back tooth region since 15 month. Habit and family history was not

significant. On clinical examination only one cusp of 37 was seen in the oral cavity. Intra oral periapical radiograph (IOPA) ([fig 2](#)) and Orthopantogram (OPG) ([fig 1](#)) was advised that reveals fully formed 37, the occlusal level of 37 was at the cementoamel junction (CEJ) of the 36 and 38 was also at the same level with around 2/3<sup>rd</sup> root formation. On IOPA ([fig 1](#)) PDL space is clearly seen around the roots of 37. Diagnosis was made embedded in relation to 37 and erupting in relation to 38.



Fig 1- OPG reveals fully formed 37; the occlusal level of 37 was at the cementoamel junction (CEJ) of the 36 and 38 was also at the same level with around 2/3<sup>rd</sup> root formation.



Fig 2- IOPA reveals fully formed 37; the occlusal level of 37 was at the cementoenamel junction (CEJ) of the 36 and 38 was also at the same level with around 2/3<sup>rd</sup> root formation. PDL and lamina dura are intact and all around the roots.

## DISCUSSION

Movement of tooth from its developmental site i.e. inside the alveolar process to their functional position i.e. in the oral cavity is known as tooth eruption. [1] Normal tooth eruption can be disturbed by many factors such as physical or mechanical obstruction, abnormal positioning of the tooth bud, dental follicle abnormality, primary eruption failure (genetic), medical syndromes like craniofacial dysostosis, osteopetrosis, or hypothyroidism etc or tooth ankylosis. [2-7] In the above case report the space for eruption of 37 is sufficient i.e. there is no loss of space or any physical obstruction therefore diagnosis of impaction is excluded. And also the eruption age of 2<sup>nd</sup> mandibular molar in oral cavity is 12 year and of 3<sup>rd</sup> mandibular molar is 17-18 years so that third mandibular molar tries to move mesially after eruption in oral cavity at the age of 17 year and above it means 37 tooth had 5 years period to completely erupt in oral cavity without any obstruction although it has completely formed root it means it cannot be a case of impacted tooth. On IOPA radiograph the periodontal ligament space (PDL space) is clearly seen it means there was no ankylosis so that diagnosis

ankylosis had been excluded. Root of 37 teeth is completely formed but the tooth is not erupted although it had good space for eruption so during root formation there was lack of eruptive force therefore the diagnosis embedded tooth was made. The patient was referred to orthodontic department for eruption of 37 teeth by fixed orthodontic treatment.

## REFERENCES

1. Massler, M., and I. Schour Studies in tooth development: Theories of eruption. *Am. J. Orthodont. Oral Surg.* 1941 Oct; 27(10):552-576.
2. Proffit, W.R. and Frazier-Bowers, S.A. Mechanism and control of tooth eruption: overview and clinical implications. *Orthodontics & Craniofacial Research.* 2009 May; 12(2): 59–66.
3. Paris, M., Trunde, F., Bossard, D., Farges, J.C. and Coudert, J.L. L'ankylose dentaire: diagnostic par tomodensitométrie et reconstruction tridimensionnelle. *European Journal of Radiology.* 2010 Jun; 91(6): 707–711.
4. Marks, S.C. Jr and Schroeder, H.E. Tooth eruption: theories and facts. *The Anatomical Record.* 1996 Jun; 245(2): 374–393.
5. Sobacchi, C., Villa, A., Schulz, A. and Kornak, U. (1993-2017) CLCN7- related osteopetrosis. In Pagon, R.A. et al. (ed.), *GeneReviews®* [Internet]. University of Washington, Seattle, WA.
6. Suri, L., Gagari, E., Vastardis, H. Delayed tooth eruption: pathogenesis, diagnosis, and treatment. A literature review. *American Journal of Orthodontics and Dentofacial Orthopedics.* 2004 Oct; 126(4): 432–445.
7. Valmaseda-Castellón, E., De-la-Rosa-Gay, C. and Gay-Escoda, C. Eruption disturbances of the first and second permanent molars: results of treatment in 43 cases. *American Journal of Orthodontics and Dentofacial Orthopedics.* 1999 Dec; 116(6): 651–658.

How to cite this article: Saalim M, Karjodkar FR, Sansare K et al. Embedded tooth - radiographic images and case report. *Int J Health Sci Res.* 2018; 8(2):302-303.

\*\*\*\*\*