

GERMINATION OF LATERAL INCISORS-A CASE REPORT

Diksha Sharma¹, Sanjay Chachra², Reena Rani*³, Abhishek Dhindsa⁴ and Shivani Targotra³¹Post Graduate Student, Department of Pedodontics and Preventive Dentistry, Swami Devi Dyal Hospital and Dental College, Haryana, India.²Professor & Head, Swami Devi Dyal Hospital and Dental College, Haryana, India.³Post Graduate Student, Department of Pedodontics and Preventive Dentistry, Swami Devi Dyal Hospital and Dental College, Haryana, India.⁴Professor, Department of Pedodontics and Preventive Dentistry, Swami Devi Dyal Hospital and Dental College, Haryana, India.***Corresponding Author: Reena Rani**

Post Graduate Student, Department of Pedodontics and Preventive Dentistry, Swami Devi Dyal Hospital and Dental College, Haryana, India.

Email id: reanchouhan521@gmail.com.

Article Received on 20/04/2020

Article Revised on 10/05/2020

Article Accepted on 30/05/2020

ABSTRACT

Geminated teeth are the consequences of developmental anomalies leading to the eruption of joined elements. According to the current definitions, gemination occurs when one tooth bud tries to divide, whereas fusion occurs if two tooth buds unite. This case report presents a 7 year old male who was diagnosed as special child for general and mild delayed mental development, was brought to the department of paedodontics and preventive dentistry with a chief complaint of blackish discoloration and bad breath. Intraoral examination revealed dental caries in maxillary lateral incisor and dental anomalies of form/number in the maxillary and mandibular incisor region. Which was confirmed by counting the number of teeth which was found to be as germination in maxillary right lateral incisor and mandibular left lateral incisor.

KEYWORDS: Germination, Special Child, Fusion.

Figure 1:- Patient (Special child).



Figure 2:- Lateral incisors in maxilla and mandible showing Gemination.

The dental treatment included, removal of the geminated right maxillary lateral incisor and sealing of the groove caused by the fusion of left mandibular lateral incisor with a resin-based sealant to prevent caries onset. The parents were then informed and guided regarding maintaining oral hygiene of the child and training on mechanical plaque removal with powered toothbrush and low sugar diet was recommended. Written consent was obtained from child's parents for case report and for disclosure of child's picture.



Figure 3: Extracted decayed maxillary Lateral incisor.

INTRODUCTION

Developmental dental disorders may be due to abnormalities in the differentiation of the dental lamina and the tooth germs that is anomalies in number, size, and shape, or due to abnormalities in the formation of the dental hard tissues, that is, anomalies in structure. However in some, both stages of differentiation are abnormal. Developmental dental disorders are not only congenital, but they may also be inherited, acquired, or idiopathic.^[1,2]

The term Gemination may be defined as the formation of two crowns from a single tooth, while in fusion, two different teeth unite together as one, and on counting the teeth, there is one less than normal. In 1963, Tannenbaum and Alling, defined gemination as the formation of the equivalent of two teeth from the same follicle, with evidence of an attempt for teeth to be completely separate, this indicated clinically by a groove or depression which could delineate two teeth. They stated that in germination, if the bifid tooth is counted as one entity, the total number of teeth in the dental arch is otherwise normal.^[3-5]

Dental anomalies of number and forms may occur in the primary and permanent dentitions. The terms double teeth "double formations," "joined teeth," "fused teeth," or "dental twinning" are often used to describe fusion or gemination, both of which are primary development abnormalities of the teeth.

Etiology

Although the etiology is not clear, environmental factors, trauma, vitamin deficiencies, systemic diseases as well as certain genetic predispositions have been described as the possible causes.^[4]

Prevalance

Many epidemiological surveys have been conducted in different parts of the world, to determine the prevalence of various types of dental anomalies. Data available for the primary dentition combined the prevalence of fused and germinated teeth, these conditions being relatively frequent, it ranges from from 0.5 percent to 2.5 percent according to the population surveyed. The frequency of a bilateral gemination is 0.02% in both dentitions and it is found more frequently in Mongolian race (5%) than in Caucasian race (0.5%). Gemination of deciduous teeth is more frequent than that of the permanent teeth.^[6]

DISCUSSION

As we all know the literature on the occurrence of double teeth is vast, but there is still much discussion concerning the nomenclature. Some of the authors have tried to differentiate them by counting the teeth or by observing the root morphology; others use fusion and gemination as synonyms. Diagnosis based on counting the number of teeth present in the dental arch, is not, however, always possible. This is because nothing impairs the fusion between a "normal" and a supernumerary element while

the contiguous "normal" tooth is congenitally absent, resembling clinical cases of germination.^[7,8]

CONCLUSION

The Gemination of the deciduous teeth presents with several problems to the pedodontist. Since exfoliation times are usually different for each tooth involved in the gemination, consideration should be given to the variations in root resorption. Geminated teeth may also contribute to esthetic concerns, space problems & occlusal disturbances. Hence, Early diagnosis of an anomaly has a considerable importance and it should be followed by careful clinical and radiographic observation that allows the dentist to plan the treatment at proper time.

REFERENCES

1. Aguilo L, Gandia JL, Cibrian R, Catala M. Primary double teeth. A retrospective clinical study of their morphological characteristics and associated anomalies. *Int J Paediatr Dent.*, 1999; 9: 175-183.
2. Duncan WK, Helpin ML. Bilateral fusion and gemination: a literature analysis and case report. *Oral Surg Oral Med Oral Pathol*, 1987; 64: 82-87.
3. Shrivastava, Sandhya & Tijare, Manisha & Singh, Shweta. Fusion/Double Teeth. *Journal of Indian Academy of Oral Medicine and Radiology*, 2011; 23: 468-470.
4. Shafer WG, Hine MK, Levy BM. *A Textbook of Pathology* (5th ed). Philadelphia; WB Saunders Company.
5. Caceda JH, Crerth CJ, Thomas JP, Thornton JB. Unilateral fusion of primary molars with the presence of succedaneous supernumerary teeth: A case report. *Paed Dent* 1994; 16: 53-55.
6. Tarasingh P, Balaji K. Gemination in primary teeth - A report of two clinical cases. *Ann Essence Dent.*, 2010; 2: 48.
7. Reilly PMR. Structural and radiographic evaluation of four cases of tooth fusion. *Aust Dent J.*, 1990.
8. Terezhalmay GT, Riley CK. Gemination/fusion. *Quintessence Int.*, 1999; 30: 437.