

## Dental Fusion –A Case Report

Naorem Jenny

MDS, Senior consultant, PD Dental Health Care, Canchipur, Manipur  
Corresponding author: Naorem Jenny

---

**Abstract:** Knowing the normal morphology of tooth is important to detect the abnormal morphology of tooth. This case report describes of a dental anomaly called fusion in a seven year old boy. It is one of the rare dental anomaly seen. It can lead to certain problems like spacing, malocclusion, esthetic and periodontal problems. Thus proper diagnosis is necessary for early detection so that possible complications can be avoided.

**Keywords:** fusion, dental morphology, crown size, dental anomaly

---

Date of Submission: 23-05-2018

Date of acceptance: 05-06-2018

---

### I. Introduction:

Dental fusion is the union of 2 dental germs and is characterized by an enlarged crown and by 1 tooth less in the total arch count.[1] Individual pulp canals or a single pulp system can be observed on radiographs. Generally, the condition requires consideration of a variety of treatments. Several treatment approaches are advocated in related literature, including reduction of crown size followed by restoration, removal of the tooth, orthodontic treatment, or no treatment.[2,3]

### II. Case Report:

Patient aged 7 yrs. male came to our PD Dental Health Care And Research Centre, Manipur with a chief complaint of decay tooth in the maxillary anterior region. Patient was medically sound. On clinical finding shows a union of two root stump in the region of right upper central incisor and lateral incisor which was carious (Fig 1). No other information was obtained from familial and medical histories related to the case. On radiographic examination permanent tooth bud was seen and the resorbed roots of the primary teeth that was fused (Fig 2). After clinical and radiographic evaluation, extraction of fused primary teeth was planned. Extraction was done (Fig 3) with minimal trauma under LA (local anesthesia) and post extraction instructions were given. The extracted teeth were fused right from the cervical level to the apex of the root.

### III. Discussion:

Tooth fusion is one of the rare anomalies of the shape of the tooth. Frequently confusion of identification between fusion and gemination. To resolve the diagnostic difficulties between fusion and gemination, Brook & Winter (1970) suggested referring these anomalies in a neutral term, such as "double teeth." [4] However, these two entities should be recognized as independent. The phenomenon of gemination occurs when two teeth develop from one single tooth germ and results in a larger tooth crown that radiographically has a single root and single canal, while fusion is a union of two separately developing tooth germs typically leading to one less tooth than normal in the affected arch and radiographically two root canals and two roots. Fusion or gemination of primary teeth is more frequent than among permanent teeth. In some cases, it is difficult to establish a differential diagnosis between fused teeth and geminated teeth, particularly when they are associated with supernumerary teeth. [5] When fusion takes place during the primary dentition, congenital absence or eruptive retardation of the permanent successor may occur. A variety of problems have been reported when dental fusion are encountered in the dental arch. Clinical observation along with an orthopantomograph and periapical radiographs are necessary. Thus in our case treatment planning was formulated after the history taking, clinical and radiographic evaluation and consent of the patient's parents.

### IV. Conclusion:

Case history and clinical and radiographic examinations can provide the information required for the diagnosis of dental abnormalities. Early treatment of dental anomalies are necessary to prevent associated problems like spacing, malocclusion, esthetic and periodontal problems. Dental malformation often affects dental hygiene and esthetics of the patients. Clinicians should have a broad knowledge regarding developmental anomalies, their variations and the clinical consequences.

**Acknowledgement:**

I thank my family “ NaoremLokhendro Singh’s family of BamonLeikai, ImphalEast ” for giving me their hands of support and encouragement in this sad moment of my life.

**References:**

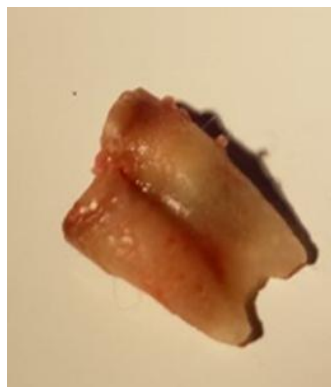
- [1]. Milano M, Seybold SV, McCandless G, Cammarata R. Bilateral fusion of the mandibular primary incisors: Report of case. *J Dent Child.*66, 1999;280-282.
- [2]. Velasco LFL, Araujo FB, Ferreira ES, Velasco LEL. Esthetic and functional treatment of a fused permanent tooth: A case report. *Quintessence Int;*28,1997;677-680.
- [3]. Surmont PA, Martens LC, De Craene LG. A complete fusion in the primary human dentition: A histological approach. *J Dent Child.* 55,1988;362-367.
- [4]. Brook, A. H. & Winter, G. B. Double teeth. A retrospective study of 'geminated' and 'fused' teeth in children. *Br. Dent. J.*, 129(3), 1970;123-30,
- [5]. Le Gall, M.; Philip, C. &Aboudharam, G. Orthodontic treatment of bilateral geminated maxillary permanent incisors. *Am. J. Orthod. DentofacialOrthop.*, 139(5), 2011;698- 703.



**FIGURE1 : Preoperative clinical view**



**FIGURE 2 : Radiographic View**



**FIGURE 3 : Extracted teeth**

Naorem Jenny "Dental Fusion –A Case Report."."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 6, 2018, pp 78-79.