

## Unusual Fusion Of Premolar And Molar : Case Report

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**Abstract:** Odontogenic anomalies of teeth can be encountered frequently in dental practice. Fusion is the union of two normally separated tooth germs resulting in the formation of a single large tooth. The prevalence of this anomaly is less than 1% and most common in the primary dentition, in the incisor-canine region. Fusions are almost always unilateral, but few cases of bilateral fusions have been reported. The purpose of this article is to report a rare case fusion of maxillary second premolar with molar. These anomalies pose a challenge even to the most experienced clinician in the management. This article highlights the importance of clinical and radiographic correlation in arriving at a definitive diagnosis.

**Keywords:** Odontogenic anomalies, teeth, premolar

### INTRODUCTION

Teeth have different and very complex anatomic structures that encounter with developmental anomaly in various aspects like defects in the structure, shape, size and number[1]. The term 'double teeth', 'joined teeth', fused teeth are often used to describe these anomalies. Pindborg defined fusion as the union between dentin and enamel of two or more separate developing teeth. Fusion is a rare developmental anomaly with a complex morphology that can give rise to reduced esthetics, misalignment, dental caries and periodontal problems. The etiology of fusion is unknown. It could be hereditary or caused by physical forces acting on developing tooth germs[2].

### CASE REPORT

55 year old male patient visited dental OPD of Jaipur Dental College with chief complaint of pain in upper right molar region. On clinical examination 14 was root stumps and was diagnosed as chronic periapical abscess. Clinically, large occlusal table was present between 15, 16 where crown were fused (Fig 1 & 2) and root caries with respect to 15 which was radiographically diagnosed as chronic periapical abscess as done by patients written consent.

One normal RVG & other with changed horizontal angulation was taken to rule out horizontal overlapping and further confirming diagnosis as fusion of crown wrt 15, 16 (Fig 3 & 4).



Fig 1: Fusion of crown wrt 15, 16



Fig 2: Increase mesiodistal width in occlusal table with respect to 15, 16

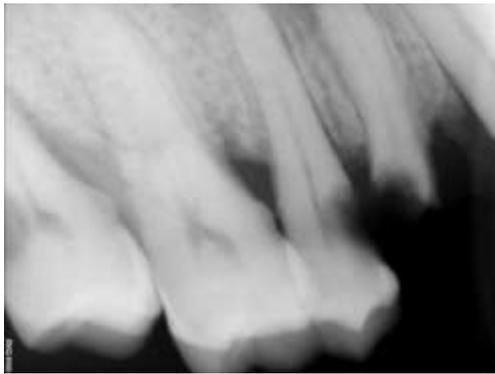


Fig 3: RVG with normal angulation



Fig 4: RVG with changed horizontal angulation

The radiodensity at proximal area of 15, 16 was less when compared to density present at proximal area of 16, 17. Two independent pulp chambers and root canals were appreciable. Number of teeth in dental arch were normal. Patient was advised for needful dental treatment.

#### DISCUSSION

Tooth fusion is when two tooth buds fuse together to make one large wide crown. The fused tooth will have two independent pulp chambers and root canals. The fusion will start at occlusal surface of crown and travel possibly to tooth apex. It can effect both primary and permanent dentition. Premolar and molar fusion is not mentioned in the english literature as per our knowledge [3].

The number of teeth present is usually reduced in fusion, but is normal if the anomaly occur between a regular and supernumerary tooth. In contrast, gemination results in an apparent increase in the number of teeth, as they are caused due to the division of a single tooth germ to form two separate teeth. In these situations, differentiation from gemination is clinically difficult or impossible[4].

Fused and geminated teeth are asymptomatic but necessitate treatment when decayed. Even though there is no variation in the treatment plan, an attempt can be made to differentiate both the anomalies by

performing a thorough clinical and radiographic examination[5].

Mader proposed the "TWO TOOTH RULE" according to which if the anomalous tooth is counted as two teeth and teeth count is normal in the arch, then it is considered as fusion. In cases where the anomalous tooth is counted as two teeth and if an extra tooth is present in the region, then it is regarded as gemination or a fusion between a normal and a supernumerary tooth[6].

Intraoral radiographs can be considered but may not be confirmatory in the differentiation of double teeth as geminated teeth have a single large root canal, whereas fused teeth may have separate or fused root canals. In the present case, the anomalous teeth revealed an increased width of occlusal table, a two different pulp chamber; different root canals and normal teeth count in the respective quadrant as evident radiographically[7].

#### CONCLUSION

Double teeth are not usual condition but they are important dental anomalies. Both fusion and gemination are prevalent in primary dentition with incisors being more affected. 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.

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