



## Case Report

### BILATERAL FUSION OF MANDIBULAR THIRD MOLAR AND SUPERNUMERARY TOOTH - A RARE CASE REPORT

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#### ABSTRACT

**F**usion is a developmental disturbance that occurs in the shape of teeth during tooth development. Fusion arises through union of two normally separated tooth germs. Fusion is said to occur either due to a physical force or pressure generated during development or it may be genetically transmitted as autosomal dominant trait. They usually occur unilaterally in both primary and permanent dentition. The purpose of this article is to report a rare case of bilateral fusion of mandibular third molar with supernumerary tooth.

**KEYWORDS:** Fusion, Gemination, Supernumerary Tooth, Double Tooth.

#### CASE REPORT

A 41 year old female patient reported to the department with a chief complaint of decayed teeth in the upper right back tooth region since one year. History revealed that the patient was apparently alright one year back after which she noticed discoloration of the tooth in the upper right back tooth region. There was no history of pain or swelling, or fever. Her medical history was noncontributory. On clinical examination, there was deep proximal decay with 14; there was pain on vertical percussion. Mobility was within the normal limits. Supernumerary tooth seen fused with both left [Fig. 1] and right third molars [Fig. 2]. Instrument probing didn't cause any pain. Since the extent and nature of the union of teeth are better recognized radiographically, radiographs were obtained for further examinations and final diagnosis. Radiographic evaluation revealed fusion of third molar and supernumerary tooth resulting in large pulp chamber [Fig. 3 & 4]. As the chief complaint of the patient was the decayed tooth in the upper right tooth region, Root canal treatment was advised with respect to right upper first premolar. Since third molars were asymptomatic and caries free, patient was encouraged to practice strict oral hygiene and maintain periodic follow ups.

#### DISCUSSION

Dental fusion is a developmental anomaly, characterized most commonly by the appearance of clinically a wide tooth, almost twice the size of the normal crown. It usually occurs due to the fusion of

two separate tooth germs during development [1]. The aetiology is unknown. However crowding of tooth germs during development can be a factor [2]. It is thought to be either hereditary or due to the pressure generated during development [1].

It is most commonly seen in the deciduous dentition than in the permanent dentition. The occurrence of fusion in the permanent posterior teeth is rare. It may either between two normal teeth or like in this case between a normal tooth and a supernumerary tooth like a distomolar or a mesiodens [3]. Radiological examinations play a crucial role in the diagnosis of this condition. The tooth may have fused or separate root canals.

The most common differential diagnosis for fusion is gemination. The number of teeth is usually reduced in fusion, but it will be normal if the anomaly occurs between a normal tooth and a supernumerary tooth. In contrast gemination results in the increase in the number of teeth as it is caused by the division of a single tooth germ to form two separate teeth [4]. The portion of the fused tooth that is formed by the supernumerary tooth is conical in appearance whereas in gemination both the halves are mirror images of each other. Differentiation of fusion from gemination is usually very difficult. Fused and geminated teeth are usually asymptomatic but require treatment when decayed.

Intra oral radiographs may be considered in the differentiation as the geminated teeth have a single large root canal whereas fused teeth usually have separate or fused root canals.

The clinical problems that may arise due to fusion are many. The teeth affected are morphologically abnormal that will be unaesthetic, it favours plaque accumulation leading to periodontal conditions, complex tooth and pulp anatomy leading to difficulties in endodontic procedures which may lead to surgical extraction [5].

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Fig. 1: Picture showing fusion of left mandibular molar with Supernumerary tooth



Fig. 2: Picture showing fusion of right mandibular molar with Supernumerary tooth

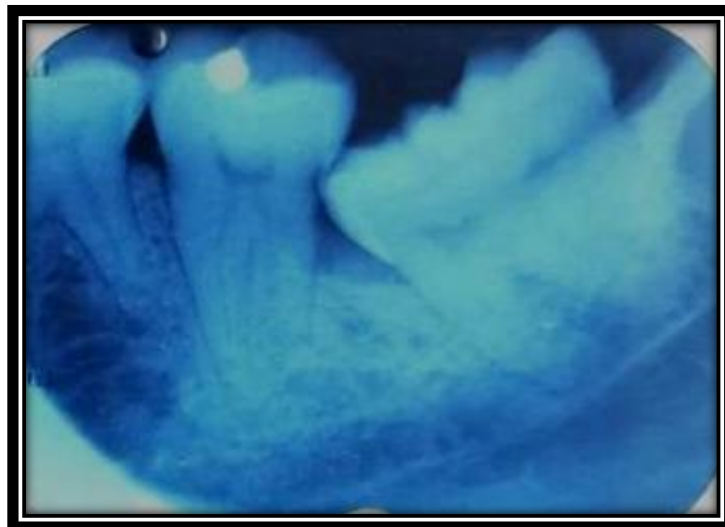


Fig. 3: Radiographic picture showing fusion of left mandibular molar with Supernumerary tooth

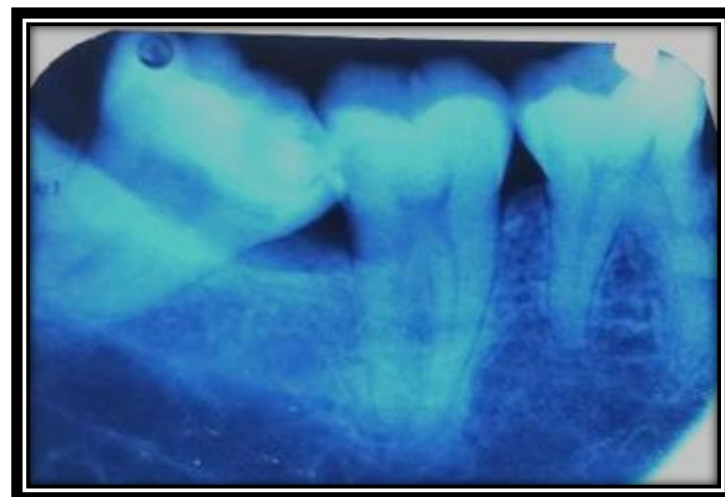


Fig. 4: Radiographic picture showing fusion of right mandibular molar with Supernumerary tooth

**CONCLUSION**

In conclusion, fusion is a rare developmental anomaly which requires careful clinical examination and others radiological tests for the proper diagnosis and treatment. The abnormal morphology of such teeth requires regular prophylaxis and early interceptive treatment in order to avoid complex periodontal and pulpal treatments.

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