

## Fusion in Deciduous Mandibular Anterior Teeth – A Rare Case

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### Abstract

Fusion Tooth due to the union of two separated tooth germs, it may be complete or incomplete tooth fusion depending on the time of union and stages of tooth development. It may be between two normal teeth or sometimes between normal tooth and supernumerary tooth germ. Here we report a rare case of fusion between right mandibular primary central and lateral incisors in a six year old girl.

**Keywords:** Tooth fusion; Double teeth; Mandibular primary teeth

### Introduction

The phenomenon of tooth fusion arises through union of two normally separated tooth germs, and depending upon the stage of development of the teeth at the time of union, it may be either complete or incomplete. On some occasions, two independent pulp chambers and root canals can be seen. However, fusion can also be the union of a normal tooth bud to a supernumerary tooth germ. In these cases, the number of teeth is fewer if the anomalous tooth is counted as one tooth. In geminated teeth, division is usually incomplete and results in a large tooth crown that has a single root and a single canal. One of the most unusual anomalies of shape of the tooth is fusion [1,2]. Here we report a rare case of fusion between right mandibular primary central and lateral incisors in a six year old girl.

### Case Report

A medically fit six year old girl reported to our dental clinic for regular teeth checkup. There was no family history of dental anomalies and no consanguinity was reported in the parents. General and extraoral examinations appeared noncontributory. Intraoral examination revealed that mandibular right side deciduous central and lateral incisors were fused together. There was a deep groove on the labial and lingual surface with incisal notching (Figure 1). The periapical radiograph exhibited that the crowns and the roots were fused with complete union of their pulp chambers and root canals in mandibular right central and lateral incisors (Figure 2).

### Discussion

The terms Twinning, Joined tooth or Double tooth, is used to



**Figure 1:** Showing fusion between mandibular deciduous central and lateral incisors.



**Figure 2:** Intraoral periapical radiograph showing fused mandibular right primary central and lateral incisor with single root and root canals.

describe both fusion and germination [3]. Fusion Tooth due to the union of two separated tooth germs, it may be complete or incomplete tooth fusion depending on the time of union and stages of tooth development. It may be between two normal teeth or sometimes between normal tooth and supernumerary tooth germ [1]. In our reported case fusion seen between two deciduous mandibular central incisors which is very rare.

‘Two tooth’ rule is introduced in 1979 to use the term fusion and germination. If the fused tooth is considered as one and the number of teeth in the dental arch is less, then the term fusion is considered. If the number of teeth in the dental arch is normal then it is termed as germination or it is a case of fusion between normal and supernumerary

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tooth. But supernumerary tooth has conical in shape so it shows difference in the two halves of the joined crowns [3]. In our case the number of teeth in the dental arch is less.

Very few cases of fusion in mandibular primary dentition have been reported from the Indian population. In Caucasians it is 0.02% and in Japanese population 0.32%. Spacing, malocclusion, esthetic and periodontal problems are the common problems in case of teeth fusion [3-5]. In our case had spacing between the anteriors. Trauma, hereditary, environmental factors are considered as the pathogenesis of tooth fusion. There is strong evidence of genetic control of fused teeth as evidenced in family [6]. Always bacterial plaque accumulation takes place in the deep groove present on the surface of the fused tooth which leads to dental caries and periodontal disease [3]. The diagnosis of tooth fusion is mainly depends on history, clinical finding and radiographic findings [6]. There was congenital absence of the permanent mandibular lateral incisors, bilaterally is also reported [7]. In our reported case permanent tooth bud was seen radiographically. Management of twin teeth requires regular and long term follow-ups.

## Conclusion

Tooth fusion is one of the rare anomalies of the shape of the tooth. Tooth fusion in mandibular primary teeth has very little

documentation in Indian population. Clinical observation along with an orthopantomograph and periapical radiographs were necessary to prove if there is an aplasia in the permanent dentition. These conditions require a minimal intervention approach, preventive procedures, and a long-term follow-up.

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