Case Report

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Fusion in Primary Lower Anterior Teeth: A Rare Case

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ABSTRACT

Background: The rare anomaly of fusion in primary dentition has a dearth of literature background in Indian population. A rare case of fusion of primary mandibular central incisors and lateral incisors is being documented in this report. The documentation with conservative intent i.e, a minimal intervention approach, preventive procedures, and a long term follow-up have been discussed.

Keywords: Fusion, gemination, minimal intervention technique, tooth germ.

INTRODUCTION

The union of two separated tooth germs results in fusion. The fusion is complete or incomplete is determined by the time of union and stages of tooth development. Fusion may be between two normal teeth or sometimes between normal tooth and supernumerary tooth germ. The phenomenon of fusion has often been confused with gemination, especially if it involves a supernumerary tooth.

The Fusion arises through the union of two separated tooth germs, whereas the gemination from an attempt at division of a single tooth germ. The clinical presentation often ranges from two separate crowns to a crown of double the size of normal. Radiographically, the presentation may range from separate pulp chambers and root canals to a common pulp chamber and root canal system. The presence of deep fissure predisposes them to dental caries and compromises aesthetics. Different treatment modalities can be implied according to the requirements of the situation. Here we report a rare case of fusion between right mandibular primary central and lateral incisors in a six year old boy.

CASE REPORT

A six year old boy reported to our college for routine check-up. There was no family history of dental anomalies and no consanguinity was reported in the parents. General and extra-oral examinations seemed non-contributory. Intraoral examination revealed that mandibular right deciduous central and lateral incisors were fused together. There was a deep groove on the labial and lingual surfaces with incisal notching (Figure 1). The periapical radiograph of teeth in question revealed that the crowns and the roots were fused along with the complete union of their pulp chambers and root canals. (Figure2).

Fig 1: Deep groove on the labial and lingual surfaces with incisal notching.

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Fig 2: The periapical radiograph shows that the crowns and the roots were fused along with the complete union of their pulp chambers and root canals.

DISCUSSION

The terms 'Twinning', 'Joined tooth' or 'Double tooth', is used to describe both fusion and germination [3]. Fusion in teeth 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]. The present case documenting fusion seen between two deciduous mandibular incisors 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. It can be a case of fusion between normal and supernumerary tooth. But supernumerary tooth has conical in shape so it shows difference in the two halves of the joined crowns [3]. If the number of teeth in the dental arch is more, then it is termed as gemination. In the present case the number of teeth in the dental arch is less, is very obviously a case of fusion.

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 predilection 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 mainly depends on history, clinical finding and radiographic findings [6]. The congenital absence of the permanent mandibular lateral incisors, bilaterally has also been 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.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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