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## Abstract

Gemination is an anomaly caused by a single tooth germ that attempted to divide during its development resulting LQ D EL;G FURZQ 7KH\ DUH IRXQG PRUH IUHTXHQWO\ LQ WKH SULPDU\ WKDQ L bilateral gemination is very rare. It is caused by complex interactions among a variety of genetic and environmental factors. This developmental anomaly may cause clinical problems including esthetic impairment, periodontal SUREOHPV FDULHV DQG WRRWK FURZGLQJ +HUH ZH UHSRUW D XQLTXH FDVH RI central incisors.

**Keywords:** Bilateral gemination; Twin tooth; Double teeth; Bi d crown

## Introduction

Tooth gemination is defined as single enlarged tooth or joined tooth where in the tooth count is normal when the anomalous tooth is counted as one. It is an attempt of a single tooth bud to divide. Clinically a tooth with a bi d crown which gives an appearance of double teeth and usually a common root canal but rarely separate root canals. Gemination and fusion clinically appears similar and they can be differentiated by assessing the number of teeth in the dentition [1-4].

The prevalence rate of unilateral gemination is 0.5% in deciduous teeth and 0.1% in permanent dentition [1]. Prevalence of bilateral cases is 0.01% to 0.04% in primary dentition and only 0.02% to 0.05% in permanent dentition [5].

## Case Report

A 25 year old male patient reported to our clinic with the complaint of decay in the right back region of the upper jaw. On clinical examination dental caries was observed on the occlusal surface of upper right first molar. Macrodonia was observed in relation to the maxillary central incisors. The central incisors were larger in the mesiodistal dimension. There was a notching present in relation to the Incisal edge of the macrodonts. On the right central incisor, the notch continued cervically as a shallow groove (Figure 1) whereas on the left central incisor the groove continued only till the middle third of the crown. The lateral incisors were placed palatally. The patient

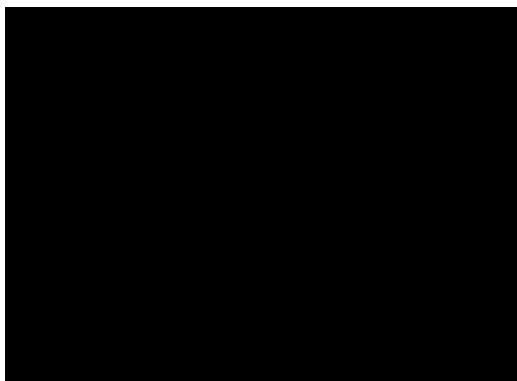


Figure 1: Clinical photograph showing bilateral Macrodonia with Incisal notching.

had normal complement of teeth for his age. The intraoral periapical radiograph of the maxillary anterior region revealed large crowns of the central incisors bilaterally. A radiolucent notch was observed in relation to the incisal edges of the central incisors (Figure 2). Relatively large pulp chambers and root canals were observed in relation to the central incisors which suggestive of bilateral gemination.

Since the patient was not concerned about the esthetic problems due to Macrodonia only composite restoration in relation to the maxillary first molar was done.

## Discussion

A disorder of growth or development in the anatomical structures that results in anything different from normal is called anomaly [6]. An attempt of the division of a developing tooth bud resulting in an incomplete formation of two teeth is called as gemination. Its crown shows a low deep groove from incisal to gingival third. Radiographically, there is only one root and usually only one root



Figure 2: Intra oral periapical radiograph of the maxillary anterior region showing large pulp chambers and root canals.

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Received May 29, 2012; Published September 27, 2012

Citation: Rao PK, Veena KM, Chatra L, Shenai P (2012) Twins on Either Side – A Case Report of Bilateral Gemination. 1:335. doi: [10.4172/scientificreports.335](https://doi.org/10.4172/scientificreports.335)

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is confused with fusion but confirmed by thorough clinical examination and radiographic investigation. Bilateral Gemination is not a usual condition, but it is one of the important dental anomalies. Recognizing the condition will help in planning the appropriate treatment. A geminated maxillary incisor requires complex multidisciplinary treatment to preserve its health and restore esthetics.

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