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Case Report

Bilateral Non-syndromic Idiopathic Congenital Tooth Agenesis

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Abstract: Idiopathic congenital dental agenesis is an uncommon clinical entity rarely found in a normal individual. This condition may involve either primary or permanent dentition, can occur in single or include multiple teeth. Diagnosis and management of tooth agenesis is very important to provide appropriate patient care. The present article briefly describes the occurrence of bilateral idiopathic congenital tooth agenesis involving permanent maxillary lateral incisors and bilateral mandibular second premolars found in a 25-year-old Indian male patient.

Keywords: Congenital tooth agenesis, Idiopathic, Maxillary lateral incisors, Mandibular second premolars, non-syndromic

Introduction

A literature search shows congenital agenesis of teeth occurring in a non-syndromic patient without any particular etiology which can be referred as an idiopathic nature. This clinical entity can involve any dentition either primary or permanent or any tooth [1]. The most commonly seen congenitally missing teeth are the third molars followed by maxillary lateral incisors and mandibular second premolars. There is no exact true etiology behind the occurrence of tooth agenesis; however, various genetic and environmental factors have been suggested as causative factors for tooth agenesis in humans [1]. The present article enlightens the occurrence of bilateral idiopathic congenital dental agenesis involving maxillary lateral incisors and mandibular second premolars detected in an Indian patient following routine clinical and radiographic examination. Details of the present case are elaborated in Table 1 and Figure 1.

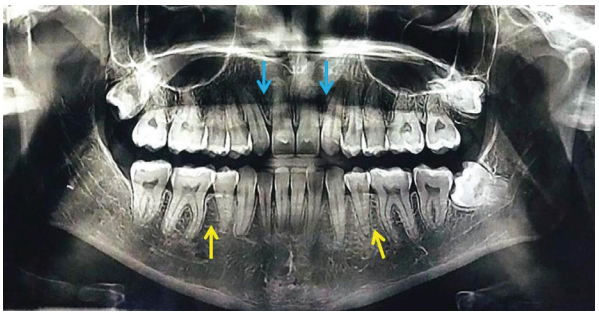

Figure 1: Panoramic radiograph showing idiopathic congenital tooth agenesis involving permanent maxillary bilateral lateral incisors (red arrows) and bilateral mandibular second premolars (yellow arrows). Congenital agenesis of mandibular right third molar is also evident.

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Table 1: Patient details associated with multiple tooth agenesis (Figure 1)

Age & Gender & Ethnicity	Chief Complaint	Clinical Features	Radiographic Features	Treatment Provided
25 years Male Indian	Pain in the lower left back tooth region from 15 days.	Inflamed pericoronal flap covering mandibular left third molar. Complete set of permanent teeth with clinical missing of maxillary bilateral lateral incisors and mandibular bilateral second premolars.	Congenital agenesis of maxillary right and left permanent lateral incisors. Congenital agenesis of mandibular right and left second premolars. Congenital agenesis of mandibular right third molar.	None

Discussion

The presence of tooth agenesis sometimes leads to spacing in the dental arch or can cause esthetic impairment. In the present case, no spacing was observed as eruption of other teeth have accommodated well in the dental arch and filled the gap, and also no esthetic impairment was observed. Nagaveni NB [2] recently correlated the occurrence of permanent mandibular incisors agenesis in relation with the dermatoglyphic pattern among the Indian population. In this research work, the author found that the arch pattern was highly significant with the number greater for the study group compared to the control group. However, there was no statistically significant difference observed in the distribution of the dermatoglyphic patterns between females and males [2]. In the same Indian population, there is a case series showing occurrence of bilateral congenital agenesis of permanent mandibular central incisors as its prevalence is very low [3]. Tooth agenesis can also be found with other conditions belonging to different dental phenomenon thereby poking a 'quest' for further research. There are some case reports depicting such interesting cases challenging to the dental science. A recent Indian case report showed concomitant existence of all four second premolar agenesis involving both maxillary and mandibular arches in association with presence of a supernumerary fourth molar [4]. The combination of tooth agenesis along with formation of an extra tooth or supernumerary tooth is an extremely rare clinical entity. Another publication illustrated occurrence of bilateral agenesis of maxillary second premolars in association with bilateral ectopic eruption of mandibular first molars in a patient from Indian ethnicity [5]. Mandibular third molars are the most commonly missing teeth. Sometimes these mandibular third molars become impacted within the alveolar bone and clinical examination leads to misdiagnosis of tooth agenesis [6-8]. Therefore, radiographic examination is highly essential to rule out presence of an unerupted teeth and their associated pathology. Detection of unusual dental anomalies or conditions is very important for documentation in the scientific literature. Documented and published uncommon dental variations help further research required in that particular domain. In addition to this, documented more scientific literature enable scientist and researchers to frame new guidelines, protocols related to investigational and therapeutic parameters so that ultimately there will be more benefit to the health research and to the patient [9,10].

Conclusion

A thorough understanding of different dental anomalies development in the human dentition is highly required among the entire dental fraternity to arrive at a meticulous diagnosis and also to provide ultimate comprehensive treatment care to a patient.

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