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CONGENITALLY MISSING MULTIPLE PRIMARY TEETH: A CASE REPORT

Dental Science

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ABSTRACT

Congenitally missing teeth are a common developmental anomaly in human beings. It affects permanent dentition at a much higher rate in comparison to primary dentition. This paper reports a case of 5 year old boy child with missing multiple primary teeth.

KEYWORDS

Congenitally missing teeth, developmental anomaly, primary dentition.

INTRODUCTION

Developmental alterations in the number of teeth that develop are common. Hypodontia denotes the lack of development of one or more teeth, oligodontia refers to six or more missing teeth, and anodontia to the complete absence of teeth. Hypodontia is common in permanent dentition as compared to primary dentition. The prevalence of hypodontia ranged from 1.6-9.6% in the permanent dentition whereas in primary dentition it is 0.1-0.9%. [1] Although any of the 32 permanent teeth may be missing but those most frequently missing are the mandibular second premolars and least involved teeth are the canines or first permanent molars. [1] Females are more often affected as compared to males with a predominance of 1.4:1. [2]

Multifactorial etiology combining genetics, epigenetic and environmental factors has been suggested. [3,4]Some regulatory homeobox genes found to be associated with tooth agenesis areMSX-1, PAX-9,EDA and AXIN-2.[5] It may also be associated with some environmental insult during development. The presence of hypodontia may be associated with other dental anomalies such as small and short crowns and roots of the teeth that are present, conical crown shape, enamel hypoplasia, taurodontism, delayed eruption, prolonged eruption of primary teeth, infraocclusion of primary teeth, ectopic eruption, transposition, lack of alveolar bone, reduced vertical dimensions, increased overbite, and tooth impaction. [6]

A multidisciplinary approach may be indicated in the clinical management of problems associated with missing teeth.

The aim of the present article is to present a rare case report of multiple missing primary teeth in a 5- year old patient and describe its management.

CASE REPORT

A five-year-old male reported to the Department of Pedodontics and Preventive Dentistry with the chief complaint of missing teeth in the upper and lower front region. Thorough intraoral examination showed presence of spacing between upper primary central incisors and also between lower right primary canine and left primary lateral incisor.[Fig 1] The family and medical history of the child patient regarding missing teeth was insignificant. The other teeth were of normal color, size and shape. Intraoral periapical radiograph further revealed the absence of tooth buds of 52,62,71,81 and 82. Panoramic radiograph (OPG) revealed the absence of maxillary right and left primary lateral incisors, mandibular right and left primary central incisors, right lateral incisor alongwith absence of tooth buds of 12, 22,18, 28, 38 and 48, 17 and27. [Fig 2]

The parents of the child patient gave no history of extraction, dental anomalies and consanguineous marriage. A thorough general examination was carried out to rule out the presence of any associated syndrome.

DISCUSSION

True anodontia or congenital absence of teeth can be found in almost any region of the dental arch and in both primary and permanent dentitions. True anodontia or congenital absence of teeth can be classified into two types, total and partial. Many cases of congenitally missing teeth have been reported in the literature, but this case report presents a unique case of multiple missing primary teeth. In the present case 5 primary teeth were missing in the absence of any systemic abnormality.

Missing teeth are associated with trauma, infection, radiation, chemotherapeutic medications and endocrine disturbances.[7] Tooth agenesis has also been associated with somatic diseases like syphilis, rickets and scarlet fever.[8] It is associated with a lot of syndromes and dental anomalies like orofacial clefts, Downs syndrome (trisomy 21), Book syndrome, Coffin-Lowry syndrome, Goldenhar syndrome, Ellis-van Creveld syndrome, Marshall-White syndrome, Johanson-Blizzard syndrome, Gorlin-Chaudhary-Moss syndrome, Progeria, Tooth-and-Nail syndrome, Witkop syndrome.[7]

Recently it has been reported that tooth agenesis in humans is caused by mutations in gene encoding low-density lipoprotein receptor-related protein (LRP6). [9]

Hypodontia may lead to abnormal spacing of teeth, delayed tooth formation and deciduous tooth exfoliation, late permanent tooth eruption and altered dimension of the associated gnathic regions. [6] Tooth agenesis can result in dental malpositioning, periodontal damage, and lack of development of maxillary and mandibular bone height. [10]

A multidisciplinary approach can also be used to ensure functional occlusion and aesthetics at the same time. Genetic counselling may play an imperative role in children with multiple missing teeth.

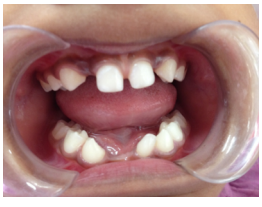
The child patient was recommended to use a removable partial denture due to his growing age.

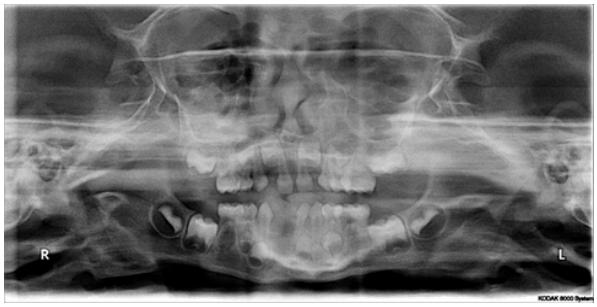
CONCLUSION

Inheritable disorders such as congenitally missing teeth are a common development anomaly. Such cases are important not only for discovery of new genes which are important for tooth development but also for correct diagnosis and treatment planning to prevent orthodontic complications. Regular and long-term follow-up is compulsory to observe the pattern of eruption of the permanent teeth.

Sources of support: Nil

Patient consent: Obtained





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