

Non Syndromic Hypodontia of Primary and Permanent teeth: A Case Report**Jina Jani¹, Jayati Dave¹, Ameer Alwani¹, Anup Panda², Natasha Shiggaon³, Mira Virda⁴**

¹Post Graduate Student, Department of Pedodontics and Preventive Dentistry, College of Dental Sciences and Research Centre, Ahmedabad; ²Professor and Head, Department of Pedodontics and Preventive Dentistry, College of Dental Sciences and Research Centre, Ahmedabad; ³Reader, Department of Pedodontics and Preventive Dentistry, College of Dental Sciences and Research Centre, Ahmedabad; ⁴Senior Lecturer, Department of Pedodontics and Preventive Dentistry, College of Dental Sciences and Research Centre, Ahmedabad

Address for Correspondence:

Dr. Jina Jani, Post Graduate Student, Department of Pedodontics and Preventive Dentistry, College of Dental Sciences and Research Centre, Ahmedabad, India.

ABSTRACT:

Hypodontia in primary teeth is rare. Missing teeth leads to abnormal occlusion or altered facial appearance which can cause psychological distress in patients. This case report shows hypodontia of primary teeth with agenesis of permanent tooth buds in 6 year old child. Detailed history and examination of this child showed it is not associated with any syndromes. It is a rare case report of non syndromic hypodontia of lower central incisors.

Keywords: Hypodontia, Permanent teeth, Primary teeth, Tooth agenesis.

INTRODUCTION

Congenitally missing teeth or Agenesis of tooth has been found to be the most commonly encountered developmental anomalies in humans. Various terms have been used for missing teeth which includes anodontia, hypodontia, oligodontia, aplasia of teeth, congenitally missing teeth, absence of teeth, and agenesis of teeth. Anodontia has been defined as congenital absence of all teeth. Oligodontia and hypodontia are two relative terms. Oligodontia refers to congenital absence of six or more teeth excluding molars and hypodontia refers to congenital absence of teeth less than six in number excluding molars.¹

Agenesis is rare in the primary dentition² with a prevalence of 0.1–0.9%³ whereas in permanent dentition 2 to 10%.⁴⁻⁶ Oligodontia can be isolated or it as a part of syndrome.⁷ The most common congenitally missing teeth are the maxillary lateral incisors followed by maxillary second premolars and mandibular central incisors. There may be unilateral or bilateral absence of teeth.¹ It is widely accepted that if the primary tooth is missing,

its succedaneous (permanent) tooth will also be missing.⁸⁻¹¹ Congenitally missing teeth may lead to lack of development of maxillary and mandibular bone height and reduced lower facial height leading to functional and esthetic compromise. This case report shows multiple absent primary and permanent teeth in 6 year old child.

CASE REPORT

A six year old male, was referred to the department of Pedodontics and Preventive Dentistry, College of Dental Sciences and research center, Ahmedabad with a chief complaint of pain in lower left back region since 2 months which is aggravated by chewing and during night it was relieved by analgesics. An intraoral examination revealed the presence of grossly carious maxillary right and left 1st molars, deeply carious maxillary right and left canine and lateral incisor, mandibular right and left 1st molars and infected root pieces of maxillary left and right primary central incisor and ankyloglossia.(Figure 1,2,3) There was also the presence of ankyloglossia (tongue-tie).

There is no significant medical and family history. Past dental history revealed extraction of natal teeth, and consulted a general dental practitioner for the same complaint and then patient was referred to college of dental sciences and research Centre.

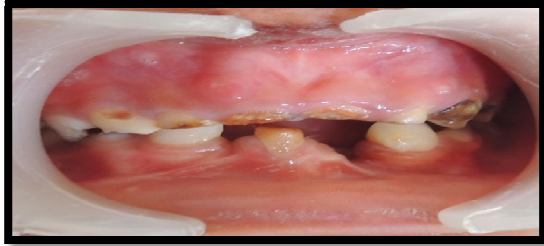


Figure 1: grossly carious maxillary right and left 1st molars, deeply carious maxillary right and left canine and lateral incisor



Figure 2: Mandibular right and left 1st molars and infected root pieces of maxillary left and right primary central incisor



Figure 3: Ankyloglossia

Panoramic radiograph revealed congenital absence of primary teeth which included mandibular right lateral incisor and its succedaneous tooth bud, left central incisor, lateral incisor, and their succedaneous tooth buds. (Figure 4)

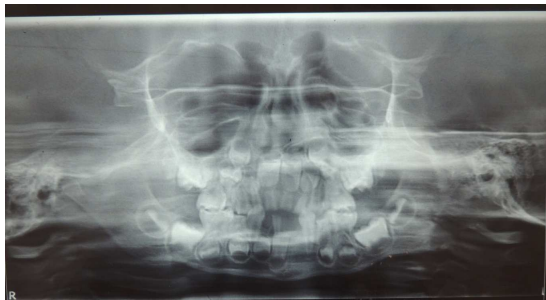


Figure 4: Panoramic radiograph

DISCUSSION

Hypodontia is the consequence of absence or severe damage to the appropriate dental lamina. The dental lamina is extremely sensitive to external insults like trauma, infection, radiation, physical obstruction or endocrine disturbances. Disruption of the dental lamina, space limitation, functional abnormalities of the dental epithelium or failure of initiation of the underlying mesenchyme – are all possible histologic explanations for that phenomenon.¹² If there is agenesis of both dentitions, it may be due to ectodermal mucosal defect. Dental agenesis is also found to be with various syndromes such as Down syndrome, Hypo hidrotic ectodermal dysplasia, Chondroectodermal dysplasia and Van Der Woude syndrome.^{13,14}

In this case report there is absence of 3 primary and 3 permanent tooth buds which can be called as moderate hypodontia. Dhanrajani¹⁵ classified hypodontia according to the severity of the condition. In to mild (up to 2), moderate (3-5), severe (more than 6).

In this case lower lateral incisors and left central incisors are missing. A study done by Salama FS, Abdel-Megid FY, in a sample of Saudi children, found that most frequently missing teeth in the primary dentition were the upper and lower lateral incisor.¹⁶ Ravn reported that patients with aplasia in the primary dentition showed a similar pattern in the permanent dentition in 80% of the cases.¹⁷ Daugaard Jensen said that agenesis in the primary dentition may be an isolated rare phenomenon, without consequence in the permanent dentition.¹⁸

Various theories for agenesis have been postulated. Anomalies in the development of the mandibular symphysis may affect the dental tissues forming the tooth buds of the lower incisors.¹⁹⁻²² Some researchers said a reduction in the dentition is regarded as nature's attempt to fit the shortened dental arches (an expression of the evolutionary trend). Another reason for agenesis could be localized inflammation or infections in the jaw

may have destroyed the tooth buds, or disturbance of the endocrine system may have caused an ectodermal dysplasia.²³

In this case report Patient had history of extraction of natal teeth this might had damaged the permanent tooth buds.

Treatment plan is advised for this patient is pulp therapy with 52,62,54,64,74,75 followed by stainless steel crowns, preventive measures, and removable appliance with missing teeth and extracted 51 and 61.

Removable partial denture is used in this case because it has acceptable cost, easy adjustment during growth, restoration of vertical dimension, and easy replacement of missing teeth. Between 3 and 6 years, removable partial denture is recommended keeping in view the growing age of the patient.²⁴ The patient was monitored after every 3 months to determine the need to change the removable partial denture

CONCLUSION

The pediatric dentist's role is very important in making a significant contribution for wellbeing of a child with hypodontia. Early detection and interception of arch changes as well as rehabilitation of children with hypodontia will help a child in a long way interact normally and integrate them with their peers and society.

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