

Multiple congenital missing primary teeth: A case report

Ankita Gaur* Rachappa M Mallikarjuna† Sunanda G Sujan‡

*M.D.S, Senior Lecturer, Dept of Pedodontics and Preventive Dentistry, Himachal Dental College and Hospital, Sundernagar. †M.D.S, Senior Lecturer, ‡M.D.S Professor and Head, Dept of Pedodontics and Preventive Dentistry, K.M.Shah Dental College and Hospital, Sumandeep Vidyapeeth University, Vadodara, India.
Contact: drankitagaur@gmail.com

Abstract:

Agenesis of teeth in primary dentition is a rare incidence reported in the dental literature. Oligodontia is the agenesis of numerous teeth (more than 6 teeth). Oligodontia in primary dentition can cause impaired growth of alveolar process, reduced lower facial height, speech impairment and deep-bite, all of which can have a physiological and psychological impact on individual. The prevalence, probable etiological factors of multiple missing primary teeth was briefly reviewed. This paper reports a rare case of multiple missing primary teeth (n=8) in a 4 years old female of Asian origin, as the previously reported cases are all of male child.

Keywords: Agenesis, Primary, Dentition

Introduction:

Agenesis of some teeth is referred to as hypodontia which is preferable to term partial anodontia. Anodontia, which implies complete failure of the teeth to develop, is a rare condition. Oligodontia is sometimes used when only a few teeth develop.¹ Stewart states, Oligodontia is the agenesis of numerous teeth (more than 6 teeth).²

Hypodontia among the primary dentition is a relatively rare occurrence, and affects primary maxillary lateral incisors, primary mandibular central and lateral incisors. The absence

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of teeth may be unilateral or bilateral¹. Hypodontia in primary dentition also have a predisposition towards a similar phenomenon occurring in the permanent dentition. The maxilla is often more commonly affected than the mandible.³ The incidence of hypodontia in primary dentition varies, ranging from 0.5%- 5%.² Among the 4564 children reviewed, 17 had agenesis of 1 or both primary maxillary lateral incisors, whereas in the same study group 7 children had agenesis of 1 or more mandibular lateral incisors.⁴ In a survey comprising, 1141 children, 7 cases with agenesis of single primary maxillary lateral incisors were found, whereas 4 cases showed agenesis of mandibular lateral incisors.⁵ The causes of oligodontia are hereditary, trauma, infection, radiation, metabolic disorder and idiopathic.⁶ Oligodontia is mainly determined by a dominant autosomal gene pattern with incomplete penetrance of the trait and variable expressivity.⁷ It can occur alone or associated with syndromes like ectodermal dysplasia,⁶ cleft lip-palate, chondroectodermal dysplasia.⁸ Oligodontia in primary dentition can cause impaired growth of alveolar process, reduced lower facial height, speech impairment and deep-bite, all of which can have a physiological and psychological impact on individual.⁹ This paper reports a rare case of 8 missing primary teeth in a 4 years old female child.

Case report:

A 4 years old female patient came to the Department of Pedodontics and Preventive dentistry, with a chief complain of missing primary teeth. Parents gave a negative history for their consanguinous marriage with no significant past medical and family history. On general examination child appeared healthy, well developed, well nourished, with appropriate physical and mental growth for her age. No abnormality was observed in the skin, hair, nails and sweating was quite normal.

Intraoral examination revealed presence of primary maxillary right and left central incisor, primary maxillary right and left canine, primary maxillary right and left first and second molars and primary mandibular right and left first, second

molars (Figure 1, 2, 3). A very thin lower alveolar ridge with highly placed abnormal lingual frenum was also evident. The teeth present were normal in size, shape and color.



Figure 1: Intraoral photograph of maxillary arch showing the missing right and left primary lateral incisors.



Figure 2: Intraoral photograph of mandibular arch showing the missing right and left primary central incisors, lateral incisors, canine.



Figure 3: Maxillary and mandibular casts showing missing primary teeth

The panoramic radiograph revealed developing permanent maxillary right and left central incisor, permanent maxillary right and left first premolars, permanent maxillary right and left first molars and permanent mandibular right and left first premolars and permanent mandibular right and left first molars (Figure 4). The clinical findings were clearly explained to the parents and options for the prosthetic rehabilitation for the missing primary teeth with acrylic partial denture, dental health education and periodic recall checkup were given. Parents were not willing for any treatment.



Figure 4: Orthopantomograph showing the missing primary teeth and developing tooth buds of few permanent teeth in both maxillary and mandibular arches.

Discussion:

Present case report is a unique and interesting case report for 3 reasons. First and foremost, there are very few cases reported in the dental literature regarding congenitally missing primary teeth. Secondly, the case report's for a 4 years old female child with 8 missing primary teeth, which itself is a rare finding as the previously reported are all of male child. Thirdly, the panoramic radiograph revealed only few developing permanent teeth. By the age of 2½-3years, calcification is evident for all the permanent teeth of both maxilla and mandible except for the permanent third molars, which are evident most often by 7-9years.^{10,11} But in the present case calcification was evident only for permanent maxillary right and left central incisors, permanent maxillary right and left first premolars, permanent maxillary right and left first molars and permanent mandibular right and left first premolars

and permanent mandibular right and left first molars. Ooshima et al reported a case of oligodontia in primary dentition with all permanent tooth buds present including the corresponding successors of the congenitally missing primary teeth;¹² whereas in the present case, successors of primary maxillary right and left canine, maxillary right and left second molars and of primary mandibular right and left second molars were absent (Table1).

With eruption of primary and then permanent anterior teeth and concomitant growth of the alveolar ridge height, the frenum recedes so that it is, in adults, attached at the mucogingival junction.¹³ The present case due to absence of both the primary and permanent anteriors exhibited ankyloglossia, which results in impaired speech and tongue movements. All these serious deficiency require long term prosthetic and preventive management.

Congenitally missing primary teeth are a rare entity, when found should be thoroughly investigated and parents should be made aware of the condition and the various modalities of treatment.

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