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RESEARCH ARTICLE

HYPER AND ULTRA-OLIGODONTIA- A RAREST OF RARE NON SYNDROMIC CASE REPORT

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ABSTRACT

Developmental dental anomalies in human beingsare like fusion, gemination, concrescence, taurodontism, congenitally missing teeth etc; amongst them congenitally missing teeth is observed as one of the common developmental anomaly and is seen occuring in primary as well as permanent dentition. Hypodontia is a common developmental anomaly; however, oligodontia is a rare occurrence. Oligodontia can be syndromic or non syndromic. Non syndromic oligodontia cases involving primary and permanent dentition have rarely been reported in the literature so far. Treatment of such anomalies are multidisciplinary and expensive and if diagnosed early, can establish good orofacial function and esthetics. The aim of this case report is to present a rare case of Nonsyndromic oligodontia involving primary and permanent dentition.

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INTRODUCTION

Developmental anomalies in primary and permanent dentition nowadays are not an uncommon findings during intraoral examination. Few developmental anomalies like Anodontia (absence of teeth) can be of two types a) Complete Anodontia (absence of all the teeth) b) Partial Anodontia (few but not all the teeth are absent) (Narendranath Reddy, 2010). Hypodontia is the term given when there is congenital absence of one to six teeth whereas oligodontia represents congenital absence of more than six teeth (Ajay, 2012). These developmental anomalies affects not only the masticatory habits but phonetics, esthetics and stomatognathic system also. The literature reports several cases of hypodontia but very few cases of non syndromic oligodontia has been reported .We describe here an extremely rare case where thirty permanent teeth are absent and eight retained deciduous teeth at the age of twenty two years .

CASE REPORT

A twenty two year female patient reported to the department of Conservative dentistry and Endodontics, Career Post-Graduate Institute of Dental Sciences and Hospital, Lucknow with a chief complaint of esthetic correction in her upper and lower jaw. On intraoral examination soft tissues showed no abnormality, on hard tissue examination in the maxillary arch only the permanent right and left canine were present mesial to their normal positions whereas in primary dentition right and left canine along with the second molar on the right side and 1st molar on left side were retained. In mandibular arch, no permanent tooth was present and only primary first and second molar were retained on both the sides (Figure 1). These findings were later confirmed by panoramic radiograph (Figure 2) as no permanent or primary tooth bud was evident. Medical history was non contributory and no such family history was reported.

Treatment modality

Multidisciplinary treatment has to be planned in such cases. Intentional root canal treatment in maxillary right and left permanent canine followed by fixed/split fixed partial denture in maxillary arch and over denture in mandibular arch. Dental implant can also be considered in both upper and lower arches depending upon patient perception towards the treatment and economic status.

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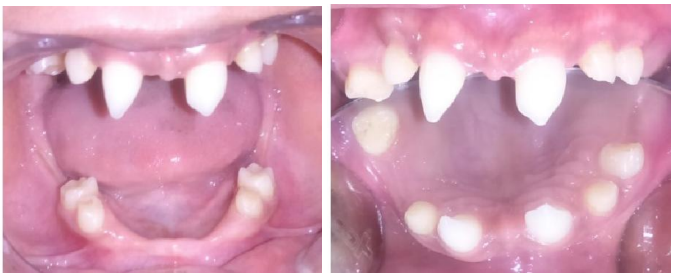

Figure 1. View of Hyper and Ultra-Oligodontia case

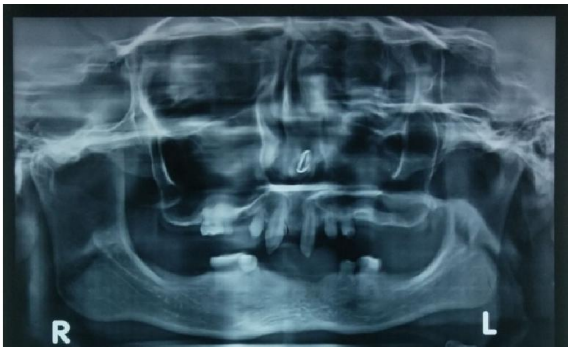

Figure 2. Panoramic view

DISCUSSION

In Hypodontia, prevalence ranges from 3.2% to 7.6% (excluding third molars) and varies according to demographic and geographic origin. Maxillary laterals are the most common teeth among the children with cleft palate and its prevalence varies from 56.1% to 74%. (Els Marie Anderson *et al.,* 2015) In isolated cleft palate children, prevalence rate is 4-5 times more than without cleft palate and is higher in mandible when compared to maxilla (Anderson *et al.,* 2010). Hypodontia typically has been reported unilaterally despite the body's genetic information is identical on both sides, even though in Down syndrome it has been reported bilaterally (Harris *et al.,* 2011; Andersson *et al.,* 2014). Egermark-Erikson has reported the incidence rate of 3:2 ratio in women to men and mentioned greater incidence of hypodontia in women and hyperdontia in men (Narendranath Reddy, 2010). Oligodontia reports a relatively rare condition and may vary from 0.08% to 0.16% (Singer *et al.,* 2010). Genetics play an important role in congenitally missing teeth and has been proved by studies on mono zygotic twins. Other than genetics, congenital absence of teeth may result from disturbances during the initial stages of teeth development like Ectodermal dysplasia, trauma, local inflammation, infectious diseases, systemic diseases like rickets, syphilis and severe intrauterine disturbances (Brook, 1984). Albeit absence of teeth is caused by infection, trauma, chemotherapy, radiotherapy and drugs but the majority cases are due to genetics (Ajay, 2012). In familial hypodontia it is due to autosomal dominant gene but autosomal recessive expression has also been reported. Mutation in transcription factors like MSX1and PAX9 has been reported in autosomal dominant traits as part of non syndromic Oligodontia (Punithavathy *et al.,* 2012) but non syndromic Oligodontia has rarely been reported. In this case report, thirty permanent teeth are absent so there is a need to introduce a new term like Hyper Oligodontia & Ultra Oligodontia which may define the number of teeth absent over more than twenty specifically as opposed to that of Oligodontia which does not define the number of teeth absent over ten precisely. So a new classification is introduced as **Chandra's classification** which will specify the number of teeth missing congenitally in percentage.

Chandra's classification for congenitally missing teeth for both primary and permanent dentition:

- Hypodontia- Less than 25% teeth are absent.
- Oligodontia- More than 25% but less than 50% teeth are absent.
- Hyperoligodontia- More than 50% but less 75% teeth are absent.
- Ultraoligodontia - More than 75% but less than 100% teeth are absent.

In this particular case report since thirty permanent teeth (93.75%) are congenitally missing, the term Ultra oligodontia might be appropriate and in primary dentition twelve teeth are missing (60%) and no history of extraction or natural loss of the tooth has been reported , the term Hyper oligodontia can be given.

CONCLUSION

Patient with oligodontia has problems associated not only with function and esthetics but psychological stress also. Early diagnosis and prompt multidisciplinary treatment approach with a continuous follow up is a prerequisite for good prognosis of such cases and will inculcate self confidence and improves the quality of life.

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