

Supplemental Supernumerary Teeth In Primary Dentition - Case Report

¹Dr Vishnu Rekha Chamarthi, Professor and Head, MDS, Department of Pediatric and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

²Dr Rakshana S, MDS, Post graduate student, Department of Pediatrics and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

³Dr Santhosh Priya A K R, MDS, Assistant Professor Department of Pediatrics and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

⁴Dr Dhanraj Kalaivanan, MDS, Reader, Department of Pediatrics and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

⁵Dr Sumaiyya Saleem, Assistant Professor Department of Pediatrics and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

⁶Dr. Sai Sarath Kumar Kothimbakkam, Assistant Professor Department of Pediatrics and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

Corresponding Author: Dr Rakshana S, MDS, Post graduate student, Department of Pediatrics and Preventive Dentistry, Sathyabama Dental College and Hospital, Kelambakkam, Kanchipuram, Tamil Nadu, India.

Citation of this Article: Dr Vishnu Rekha Chamarthi, Dr Rakshana S, Dr Santhosh Priya A K R, Dr Dhanraj Kalaivanan, Dr Sumaiyya Saleem, Dr Sai Sarath Kumar Kothimbakkam, “Supplemental Supernumerary Teeth In Primary Dentition - Case Report”, IJDSIR- April – 2024, Volume –7, Issue - 2, P. No. 30 – 34.

Copyright: © 2024, Dr Rakshana S, et al. This is an open access journal and article distributed under the terms of the creative common’s attribution non-commercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given, and the new creations are licensed under the identical terms.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Supernumerary teeth are extra teeth that lead to a numerical excess in the dentition; the resulting condition is known as hyperdontia. Compared to primary dentition, permanent dentition is more likely to have hyperdontia. Supplementary teeth are extra teeth that mimic the morphology of teeth and support the occlusion. We report a case study of supplemental supernumerary teeth in primary dentition with a permanent successor.

Keywords: Hyperdontia, Conical, Tuberculate.

Introduction

Supernumerary teeth are defined as those that appear in addition to the normal series.¹ According to Primosch et al, there are two types of supernumerary teeth named supplemental (normal size and shape) and rudimentary teeth (conical, tuberculate or molariform).² The differential diagnosis between a rudimentary and a supplemental tooth is made based on clinical, radiographic and

cone-beam computed tomography (CBCT) examination.³They are more prevalent in permanent dentition and in the pre-maxilla region. Prevalence rate ranges from 0.1% - 6.9% in the permanent dentition and 0.4%-0.8% in primary dentition.⁴Males are reported to be more affected than females.⁴Supernumerary teeth have multiple etiology factors, such as hyperactivity of the lamina, trauma, phylogenetic theory, atavism, environmental or genetic factors, dichotomy of the dental germ. Multiple supernumerary teeth are usually found in various medical conditions and syndromes including Cleidocranial dysostosis, Ehlers–Danlos syndrome, Gardner’s syndrome, cleft lip and palate, Chondroectodermal dysplasia, Nance–Horan syndrome, Rubinstein–Taybi syndrome and Trichorhinophalangeal syndrome.⁵ It is rare in non-syndromic patients.⁵

This case report of unilateral supplemental lateral incisor with permanent successor is extremely rare, with no associated disorder or syndrome in which supplemental tooth was detected by chance, during a regular dental examination.

Case Report

A 6-year-old girl visited the Department of Pediatric and Preventive Dentistry, Sathyabama Dental College and Hospital with the chief complaint of decayed teeth. The patient’s medical history and family history was non contributory, there was no previous trauma to the teeth or jaws and extra oral examination revealed no abnormality. Hard tissue examination revealed dental caries in relation to 52,61,74,75 and 84 and presence of extra tooth in upper right quadrant which resembled 52.(Figure1,2,3) Intraoral periapical radiograph (Figure-4) was suggested in upper right anterior region which revealed a supernumerary tooth which resembled deciduous lateral incisors with normal crown and root formation present between 52 and 53 and aligned in the

arch. The supplemental 52 was superseded by permanent successor which resembled 12. Panoramic radiograph was taken to confirm and rule out the presence of supernumerary teeth elsewhere in the oral cavity.



Figure 1: Frontal view



Figure 2: Mandibular occlusal view



Figure 3: Maxillary occlusal view



Figure 4: Intra oral periapical radiograph of 51, 52 region revealing supplemental 52 and supplemental 12.



Figure 6: OPG revealing supplemental 52 and supplemental 12

Discussion

Hyperdontia can be divided under various heads using different criteria.¹⁰ On the basis of shape, hyperdontia can be either accessory or supplemental. Accessory or supernumerary tooth are smaller in size as compared to normal teeth while supplemental tooth resemble tooth shape and supplement for occlusion (as seen in our patient).⁶ Based on the location, it can be either mesiodens, peridens, paramolar or distomolar. Distinguishing between a normal tooth and its

supplemental 'twin' may be difficult for the parent. A supplemental tooth may exhibit deep palatal pit and coronal invagination.¹⁰

Origin of supplemental tooth could be due to splitting of tooth bud into two parts which is explained by dichotomy theory or it could be the result of local, independent, conditioned hyperactivity of dental lamina.²

Supplemental teeth in both primary and permanent dentition are most commonly located in the anterior maxillary region.⁷ In this case report, the supplemental maxillary right lateral incisors were present in both primary and permanent dentition.

Supernumerary teeth are less common in the deciduous dentition with a reported incidence of 0.3–0.6 percent of the population.⁸ Possible explanations for the less frequent reporting of deciduous supernumerary teeth include less detection by parents, as the spacing frequently encountered in the deciduous dentition may be utilized to allow the supernumerary tooth or teeth to erupt with reasonable alignment as in case report here. Also, many children have an initial dental examination following eruption of the permanent anterior teeth. So anterior deciduous supernumerary teeth which may have erupted and exfoliated normally would not be detected.⁹

Anomalies in the primary dentition are positively correlated with anomalies in the permanent dentition. Skrinjarić et al.¹¹ reported that children with primary supernumerary teeth displayed anomalies in the primary dentition in 85.7% of the cases. Nik-Hussein et al.¹² reported anomalies of the permanent dentition in 50% of the subjects with primary supernumerary teeth. Mukhopadhyay et al.¹³ reported 18.2% of the children with primary supernumerary teeth had anomalies in the permanent dentition as in case report here.

Presence of a supernumerary tooth will be an innocent finding without associated pathology in 70-80% of the cases surveyed.¹³ Supplemental teeth may cause esthetic problems, delayed eruption, and crowding, and they require early diagnosis and treatment to prevent complications. Common complications include nasal eruption, cystic degeneration, dentigerous cyst formation.⁴ Supplemental supernumerary teeth should be observed till the child is old enough, if it is not interfering with the development and eruption of adjacent teeth. Removal of supernumerary teeth is recommended in cases where they are causing any pathological changes or crowding along with esthetic problem and difficulty in oral hygiene maintenance. In the present case, since their presence did not cause esthetic problem nor was considered responsible for delayed eruption of permanent incisors as the case was reported earlier at 5 years of age, they were not extracted but maintained in the arch. Patient is kept under observation till the eruption of permanent incisors.

Conclusion

In absence of any associated syndrome, patients with supplemental lateral incisor are rare. The therapeutic decision regarding the treatment for supplemental tooth must be flexible, based upon the age, shape, dimension, position, pathological condition, aesthetics, oral hygiene maintenance and existence of any associated problems.

References

1. Day, R. C. B.: Supernumerary teeth in the premaxillary region, *Bdt Dent J*, 116:304-308, 1964
2. Amarlal, D. and Muthu, M.S., 2013. Supernumerary teeth: review of literature and decision support system. *Indian Journal of Dental Research*, 24(1), p.117.
3. R. P. Anthonappa, N. M. King, A. B. M. Rabie, and S. K. Mallineni, "Reliability of panoramic radiographs for identifying supernumerary teeth in children," *International Journal of Paediatric Dentistry*, vol. 22, no. 1, pp. 37-43, 2012
4. Rakesh N. Bahadure, Nilima Thosar, Eesha S. Jain, Vidhi Kharabe, Rahul Gaikwad, "Supernumerary Teeth in Primary Dentition and Early Intervention: A Series of Case Reports", *Case Reports in Dentistry*, vol. 2012, Article ID 614652, 4 pages, 2012. <https://doi.org/10.1155/2012/614652>
5. Chaudhary S, Chaitra TR, Sultan S, Arora R. Supernumerary teeth in primary dentition. *BMJ Case Rep*. 2013 Jul 26;2013:bcr2013200029. doi: 10.1136/bcr-2013-200029. PMID: 23893278; PMCID: PMC3736502.
6. Sreekanth Kumar Mallineni, "Supernumerary Teeth: Review of the Literature with Recent Updates", *Conference Papers in Science*, vol. 2014, Article ID 764050, 6 pages, 2014. <https://doi.org/10.1155/2014/764050>
7. Yildirim G, Bayrak S. Early diagnosis of bilateral supplemental primary and permanent maxillary lateral incisors: a case report. *Eur J Dent*. 2011 Apr;5(2):215-9. PMID: 21494392; PMCID: PMC3075995.
8. Humerfelt D, Hurlen B, Humerfelt S. Hyperdontia in children below four years of age: a radiographic study. *ASDC J Dent Child*. 1985;52:121-124. Stellzig A, Basdra EK, Komposch G. Mesiodentes: Incidence, morphology, etiology. *J Orofac Orthop* 1997;58:144-53.
9. Mohan RP, Verma S, Singh U, Agarwal N. Supplemental tooth in primary dentition. *BMJ Case Rep*. 2014 Jun 9;2014:bcr2013010367. doi: 10.1136/bcr-2013-010367. PMID: 24913075; PMCID: PMC4054661.

10. Shafer WG, Hine MK, Levy BM. A textbook of oral pathology. 4th edn Philadelphia: WB Saunders, 1993:49
11. Skrinjarić I, Barac-Furtinović V. Anomalies of deciduous teeth and findings in permanent dentition. Acta Stomatol Croat 1991;25:15
12. Hussein, Majid ZA. Dental anomalies in the primary dentition; distribution and correlation with the permanent dentition. J Clin Pediatr Dent 1996;21:15-9.14.
13. Mukhopadhyay S, Mitra S. Anomalies in primary dentition: Their distribution and correlation with permanent dentition. J Nat Sc Biol Med 2014;5:139-43