



AN INVERTED IMPACTED MESIODENS : A CASE REPORT

Dr. Amarpreet Singh

Associate professor, department of public health dentistry, Himachal dental college and hospital sundernagar

Dr. Palvi Gupta*

Post graduate student , department of pedodontics and preventive dentistry, Himachal dental college and hospital sundernagar *Corresponding Author

ABSTRACT The most significant dental anomaly affecting the primary and early mixed dentition are the Supernumerary teeth. Supernumerary teeth can be classified based on position: mesiodens: occurring in the incisor region, paramolar: occurring besides a molar, and distomolar: occurring distal to the last molar. This case report presents a case of an inverted and impacted buccally placed unilateral mesiodens and its management. Early intervention and surgical removal of the unerupted supernumerary tooth as soon as it is detected is necessary to prevent the future complications such as retarded eruption of the permanent incisors, crowding, space loss and midline shift which may require extensive orthodontic therapy. Therefore, an impacted supernumerary tooth should be extracted as soon as diagnosed at a young age.

KEYWORDS : supernumerary teeth , impaction, mesiodens

INTRODUCTION

The most significant dental anomaly affecting the primary and early mixed dentition are the Supernumerary teeth.¹ Development of a supernumerary tooth may occur in any region of the dental arches and it is characterized by excess number of teeth than normal series.² In the permanent dentition prevalence varies between 0.1% and 3.6%.³ In deciduous teeth, prevalence is lower, amounting to 0.3-0.8%.⁴

The reasons for development of these supernumerary teeth are not completely understood. The suggested theories include dichotomy of bud teeth, hyperactivity of the dental lamina and a combination of genetic and environmental factors, proliferation of odontogenic cell rests, palatal off shoot from continued activity of the dental lamina after the normal number of tooth buds are formed, atavism and consanguineous marriages.⁵

Supernumerary teeth can be classified based on position: mesiodens: occurring in the incisor region, paramolar: occurring besides a molar, and distomolar: occurring distal to the last molar.⁶ They can occur either as isolated events or multiple, unilaterally, or bilaterally in both jaws or as part of a syndrome or disease.⁷ Mesiodens is located in the midline palate between the two maxillary central incisors. And this is the most affected region with a prevalence of 0.15-1.9% in the general population.⁸

The term mesiodens was coined by Bolk (1917). Mesiodens is a small tooth with a short root.⁹ They are the most common supernumerary teeth accounts around 80% of all supernumerary teeth series which may erupt normally, appear inverted, stay impacted or take a horizontal position series.² Morphologically, it may have heterogeneous forms. Three common types are as follows: conical or peg shaped, tuberculate and supplemental (tooth like) have been reported, of which the conical form is the most common type.¹⁰ Mesiodens can occur individually or as multiples called as mesiodentes.¹¹

They are usually asymptomatic and discovered during routine radiographic examination. They may be detected by clinical examination as a result of delay in the normal eruption of the permanent incisor and may give rise to a variety of complications, such as impaction, delayed eruption and ectopic eruption of adjacent teeth, crowding, diastema, axial rotation and displacement, radicular resorption of adjacent teeth and dentigerous cyst. Therefore, early detection and timely intervention is imperative to avoid these deleterious effects in the maxillary anterior region.¹²

This case report presents a case of an inverted and impacted buccally placed unilateral mesiodens and its management.

CASE REPORT

A 9 year old male patient reported to the private clinic with a chief complaint of pain in the upper front region. A thorough examination was conducted where medical history and family history was unremarkable. On clinical examination, trauma was observed w.r.t 11

and 21 and Ellis class 3 fracture was diagnosed w.r.t to 11 and 21. Rvg was taken which revealed the presence of an impacted inverted mesiodens between the upper central incisors.(fig.1)



(fig.1)

The surgical extraction of mesiodens and rct of 11 and 21 was planned. The surgery was performed with local anesthesia (lidocaine 2% epinephrine 1:100,000), using the infiltrative technique first in the vestibular region, and in the palatal region in the nasopalatine nerve. Using a number 15 scalpel blade, an incision was made resulting in a flap from right lateral incisor to left lateral incisor. After detaching the flap, visualization of the dental elements was not possible and osteotomy was necessary to expose a portion of the teeth.(fig.2)



(fig.2)

Then, the extraction was done (fig.3) and prf was placed inside the socket.



(fig.3)

The surgical area was sutured with silk thread 4.0.(fig.4)



(fig.4)

The patient was prescribed anti-inflammatory (1 dexamethasone 4 mg orally before going to bed). The sutures were removed 7 days later. Patient was recalled after 2 weeks. Excellent healing and bone formation was observed.

DISCUSSION

Mesiodens is referred as an unerupted supernumerary teeth in the maxillary midline between the two central incisors.¹³ Prevalance of one mesiodens is 78.1% of the cases and two in 21.9% of the cases.¹⁴ Most of the mesiodentes (55.2%) were found to be in a vertical position (55.2%) followed by inverted position (37.6%) and horizontal position (7%).³ Many remain unerupted, and if they are erupting, it will be an ectopic eruption.¹⁵

The impacted mesiodens can be discovered as a result of patient's complaint or any discomfort or pain in the region as in our case or when they seek treatment for malocclusion or by bony swelling. They are oftenly diagnosed by radiographic examination. A radiograph is essential for correct diagnosis and treatment planning.¹⁶

The treatment of impacted mesiodens centers on several factors which include the age of the child, clinical manifestation, capacity of the child to tolerate the surgical procedure, and root development stage of the adjacent permanent teeth.¹⁷

In children and adolescents, extraction has been recommended to prevent occlusal changes as well as cyst formation. Yague-García et al emphasized on early removal of supernumerary teeth in order to prevent complications.¹⁸

Nevertheless, extraction that has been done at the right time in this case, can prevent the future migration of the supernumerary teeth and associated complications. When the supernumerary teeth are surgically extracted, there has been no much reports on complications or disturbances to adjacent teeth with incomplete root development compared to surgery postponed for complete root development of incisors²

CONCLUSION

Early intervention and surgical removal of the unerupted supernumerary tooth as soon as it is detected is necessary to prevent the future complications such as retarded eruption of the permanent incisors, crowding, space loss and midline shift which may require extensive orthodontic therapy. Therefore, an impacted supernumerary tooth should be extracted as soon as diagnosed at a young age.^{2,17}

REFERENCES

1. Mesiodens: A Case Report and Literature Review Akhil Jose E J*, PrashantBabaji and Shashibushan kReceived: April 14, 2018; Published: April 27, 2018
2. Sarne O, Shapira Y, Blumer S, Finkelstein T, Schonberger S, et al. (2018) Supernumerary Teeth in the Maxillary Anterior Region: The Dilemma of Early Versus Late Surgical Intervention
3. Brook AH. Dental anomalies of number, form, and size: Their prevalence in British school children. *J Int Assoc Dent Child* 1974;5:37-53
4. Brabant H. Comparison of the characteristics and anomalies of the deciduous and the permanent dentitions. *J Dent Res* 1967;46:897-902.
5. Nagaveni NB, Umashankara KV, Sreedevi, Reddy BP, Radhika NB, Satisha TS, et al. Multi-lobed mesiodens with a palatal talon cusp: A rare case report. *Braz Dent J* 2010;21:375-8.
6. Garvey MT, Barry HJ, Blake M. Supernumerary teeth-an overview of classification, diagnosis and management. *J Can Dent Assoc* 1999; 65(11): 612-616.
7. Penkala J, Jasniewicz G. Presence of supernumerary deciduous teeth in children with cleft palate. *Czas Stomatol* 1986;39:745-9.
8. Russell KA, Folwarczna MA. Mesiodens - diagnosis and management of a common supernumerary tooth. *J Can Dent Assoc* 2003; 69(6): 362-366.
9. Primosch R. E. 'Anterior supernumerary teeth assessment & surgical intervention in children'. *Pediatr. Dent* 1981. 3(2);204-215.
10. Gallas MM, Garcia A. Retention of permanent incisors by mesiodens: a family affair. *Br Dent J* ;188(2):63-4
11. Viswanathan R, Pai S. Bilateral impacted inverted mesiodentes in the palatal vault: A rare case report. *Ped Dent* 2015;25:26-8.
12. Hasan S, Ahmed SA, Reddy LB. Dentigerous cyst in association with impacted inverted mesiodens: Report of a rare case with a brief review of literature. *Int J Appl Basic Med Res* 2014;4:S61-4.
13. Canoglu E, Er N, Cehreli ZC. Double inverted mesiodentes: Report of an unusual case. *Eur J Dent* 2009;3:219-23
14. Mukhopadhyay S. Mesiodens: A clinical and radiographic study in children. *J Indian Soc Pedod Prev Dent* 2011;29:34-8.
15. Desai VD, Baghla P, Sharma R, Gaurav I. Inverted impacted mesiodentes: A case series. *J Adv Med Dent Scie* 2014;2:135-40.
16. Langland OE, Langlais RP, McDavid WD, Del Balso AM. Panoramic radiology. 2 ed. Philadelphia: Lea & Febiger, 1989.
17. Omer RS, Anthonappa RP, King NM (2010) Determination of the optimal time of surgical removal of unerupted anterior supernumerary teeth. *Pediatr Dent* 32(1): 14-20
18. Yague-García J, Berini-Ayres L, Gay-Escoda C. Multiple supernumerary teeth not associated with complex syndromes: a retrospective study. *Med Oral Patol Oral Cir Bucal* 2009; 14(7): E331-336.