Case Report *Open Access*

Journal of Innovative Clinical Trials and Case Reports

ISSN: 3068 - 1936

DOI: *doi.org/10.63721/25JCTC0115*

Multiple Impacted Supernumerary Premolars in a Non-syndromic Patient – Report of a Unique Case

Nagaveni NB[1*], Sahana R Kachattiyawar[2], Sathya Prasad Mahantesh[3] and Umashankara KV[4]

[1]Professor, Researcher, Specialist in Pediatric, Dentistry Garike Dental Care, Davangere, Karnataka, India
[2]Post graduate student, Department of Oral Medicine and Radiology Raja Rajeshwari Dental College and Hospital Bangalore, Karnataka, India
[3]Senior Lecturer, Department of Conservative Dentistry and Endodontics, College of Dental Sciences, Davangere, Karnataka, India
[4]Oral and Maxillofacial Surgeon, Garike Dental Care, Davangere, Karnataka, India

Citation: Nagaveni NB (2025) Multiple Impacted Supernumerary Premolars in a Non-syndromic Patient – Report of a Unique Case. J. of Inn Clin Trail Case Reports 1(2), 1-5. WMJ/JCTC-115

Abstract

The aim of this research paper is to show-case the occurrence of multiple impacted supernumerary premolars in a non-syndromic male patient belonging to Indian ethnicity. Supernumerary teeth occurring in the anterior incisor region is most frequently observable entity. Development of multiple supernumerary teeth being un-erupted in the premolar region is rarely encountered in a normal individual.

***Corresponding author:** Nagaveni NB, Professor, Researcher, Specialist in Pediatric, Dentistry Garike Dental Care, Davangere, Karnataka, India.

Submitted: 11.08.2025 **Accepted:** 18.08.2025 **Published:** 25.08.2025

Keywords: Impaction, Impacted Premolars, Non-Syndromic Patient, Retained Primary Teeth, Supernumerary Premolars

Introduction

Human race consists of two sets of teeth constituting 32 number of permanent teeth and 20 number of primary teeth in his life time. Primary teeth or baby teeth or milk teeth are the first set of teeth replaced by permanent teeth which remain life-long. However, sometimes extra set of teeth which are also termed as "supernumerary teeth" are found in addition to the above normal set of teeth [1]. Various terms are used to denote occurrence of supernumeraries in different regions of the oral cavity like mesiodens, para-premolars, paramolars and distomolars. Mesiodens occur

in the anterior region, parapremolars occur in the premolar region, paramolars develop near molars and distomolars are usually seen distal to the third molars [2-7]. Among these, occurrence of mesiodens is frequently reported compared to other supernumeraries. Supernumerary teeth may see either erupted or remain un-erupted or impacted, may occur single or in multiple, may remain asymptomatic or can be associated with other anomalies [4-10]. It is been reported that supernumerary teeth occur majority time either single or in two. Occurrence of multiple supernumerary teeth is a rare phenomenon and is always associated with a syndromic condition [7-11]. Therefore, with this brief historical background on supernumerary teeth, the present research paper aims to provide brief insight on occurrence of multiple impacted supernumerary premolars which found in a non-syndromic Indian patient. The current article also provides evidence-based information about occurrence of such a rare dental phenomenon which is hardly reported in the dental literature.

Case Details

The 52-year-old male patient reported to a private dental clinic complaining of pain in the upper left back tooth region from past six days. The detailed description of the case is elaborated in Table 1.

Table 1: Elaborative Description of the Case Constituting Multiple Impacted Supernumerary Premolars

Age/ Gender/ Ethnicity	Chief Complaint	Clinical Features	No of impacted supernumerary premolars	Radiographic Features (Based on both Orthopantomograph and CBCT scan diagnostic aids) Figures 1 and 2
52 years Male Indian	Complaining of pain in the upper left back tooth region from past 6 days.	Complete set of permanent teeth with all third molars erupted. Root canal treated maxillary right first and second premolars and mandibular left second premolar. Presence of crowns in relation to mandibular left first and second molars. Absence of any syndromic/systemic/metabolic disorders	6 impacted premolars	Presence of impacted two supplemental premolars in the mandibular right region well below the first and second premolars. Three impacted supplemental premolars in the mandibular left region below the roots of first and second premolars. Among these three, one was in horizontal impaction and other two in mesially and distally inclined. Presence of mesially impacted supplemental premolar in the maxillary region well below the roots of first and second premolars.

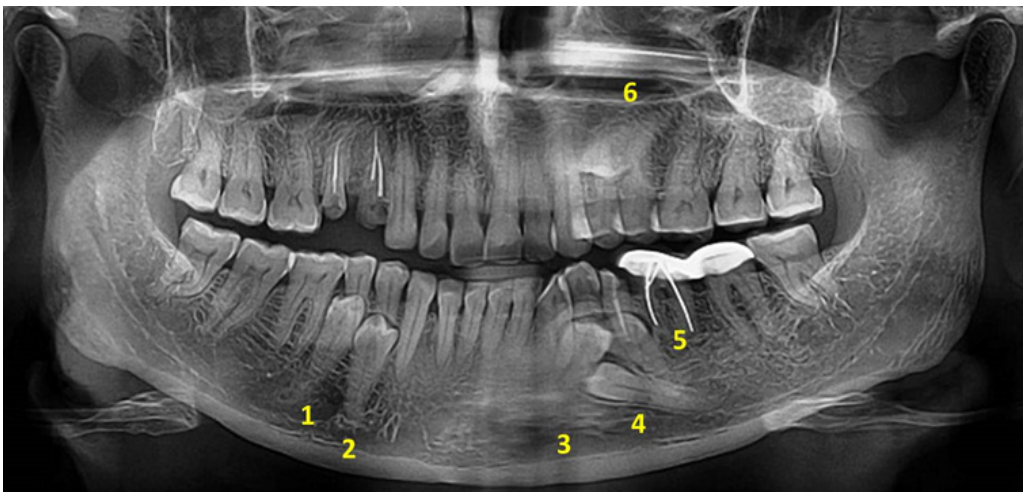

Figure 1: Orthopantomograph Showing Impacted Multiple Supplemental Supernumerary Premolars (Total 6) in the Mandibular and Maxillary Premolar Region

Figure 2: Cone-Beam Computed Tomographic Image Depicting Impacted Multiple Supplemental Premolars in the Mandible

Discussion

Evidence based research methodology is highly essential in documenting an uncommon dental variations, anomalies, disturbances or developments. Recording of such rare dental entities is highly warranted in the dental literature for formulating diagnostic, therapeutic, differential and classification criteria or guidelines in order to enhance the richness of the available dental literature pertaining to dental anomalies [12]. The newly formulated guidelines can be incorporated in the text books, research papers, dental atlas and even in dental magazines to show case the novelty of the literature. This not only improves the knowledge of the pupils but also give the pave for further research work for digging the "quest of nature" including international collaborative work to share information across the globe. Therefore, recording and documentation of such rare dental variations is mandatorily

required among all clinicians, academicians, researchers and specialties. With this intention, the present research paper was designed and prepared to shed more light on the occurrence of multiple impacted supernumerary teeth in a non-syndromic normal individual.

Mandibular premolars are teeth most of the time show variations in their eruption, shape, size and in number [8-14]. There is a paucity of data on the occurrence of multiple impacted supernumerary premolars in a normal patient. In the case described here, total of six impacted supernumerary premolars was observed when patient was subjected to orthopantomography and CBCT imaging. Two were noticed in the right mandibular region located below the roots of normal first and second premolars. Three were observed on the mandibular left region below the roots of premolars. Among these three, one was in horizontal impaction locked between other two supplemental premolars. In the maxillary left side, one premolar was noticed mesially impacted at the level of root apices of first and second premolars. Clinically, presence of normal set of both first and second premolars was confirmed followed by radiographic examination. Therefore, based on both clinical and radiographic features and based on the available literature, a diagnosis of supplemental supernumerary premolars was made in the present case. Supernumerary teeth when occur, resemble their normal counterpart both morphologically and radiographically including crown and root anatomy. Such supernumerary teeth are called as 'supplemental' teeth. When they do not resemble, they termed as 'rudimentary' teeth [1-3]. In the current case, all six impacted premolars resembled exactly same compared to normal premolars from all aspect including size and shape. Hence, based on literature search the impacted premolars were diagnosed as 'supplemental' premolars.

When extra premolars develop, are usually may remain impacted or erupt into the oral cavity. When they erupt, they usually erupt either buccal or lingual to the normal first or second premolars. Such teeth were called as 'para-premolars' [5-12]. In the present case, all six premolars were found impacted, hidden deep in the bone, below the level of root apices of normal premolars. However, there was no any cystic or developmental malformations or disturbances observed in association with these impacted premolars. Using three dimensional CBCT scan it was possible to evaluate the exact location of impacted supernumerary premolars and found that mandibular impacted premolars were located buccal to the roots of normal premolars. Therefore, it is well established fact that utilization of three dimensional CBCT image is of utmost important to view the anatomic structures from all aspect and its associated structures [15]. Usage of such innovative advanced diagnostic tool is very important to arrive at correct diagnosis and to plan for various treatment strategies.

In the case described here, all six premolars were found asymptomatic and not associated with any abnormal changes like cyst formation or developmental disturbances. So, considering the age of the patient, patient was kept under regular observation by attending only chief complaint of the patient. However, patient was informed about the presence of hidden condition of the teeth and to maintain regular follow-up.

Conclusion

Thorough knowledge and awareness about the occurrence of different dental anomalies like multiple impacted supernumerary teeth in a normal individual is essential among all dental practitioners and academicians to provide correct diagnosis and to render appropriate treatment.

References

1. Nagaveni NB, Sreedevi B, Praveen BS, Praveen Reddy B, Vidyullatha BG, et al. (2010) Survey of mesiodens and its characteristics in 2500 children of Davangere city, India. Eur J Paediatr Dent 11:185-188.
2. Nagaveni NB, Umashankar KV (2023) Report of a rare odonto-stomatologic anomaly– maxillary paramolar: Series. Clin Med Case Rep Rev 1: 1-3.
3. Nagaveni NB (2024) Maxillary fourth molar (Distomolar/Distodens) in association with Rhyzomicroly and pyramidal molars in an Indian patient–A rare case report. Clin Pathol 8: 000190.
4. Nagaveni NB (2023) Three lobed (multi-lobed) incisoriform mesiodens with type I talon cusp – Report of a Unique dental anomaly. Glob J Res Dent Sci 3: 7-10.
5. Nagaveni NB, Umashankar KV (2023) Vertical,

intra-osseous impaction of permanent maxillary central incisor in association with a mesiodens. EC Dent Sci 22: 1-4.

6. Nagaveni NB, Umashankara KV, Sreedevi, Reddy BP, Radhika NB, et al. (2010) Multi-lobed mesiodens with a palatal talon cusp – A rare case report. Braz Dent 21: 375-378.
7. Nagaveni NB (2023) Inversion of impacted mesiodens: Report of case series with literature review. Glob J R Dent Sci 3: 7-12.
8. Nagaveni NB (2023) Migration of mandibular supernumerary premolar in association with multiple anomalies – a rarest case report with literature review. Glob J Res Dent Sci 3: 1-6.
9. Nagaveni NB (2023) Bilateral 'Molarization' of the mandibular second premolars in association with unusual dental va.riation – report of a rarest case. Glob J Res Dent Sci 3: 4-6.
10. Nagaveni NB (2023) A rare combination of tooth agenesis in association with anomalous supernumerary tooth: Report of a rare case. Oral Health Dent 6: 18-21.
11. Nagaveni NB (2024) Concomitant existence of tooth agenesis (agenesis of four second premolars) and supernumerary teeth (dens distomolar) – Report of a Rarest case. J Dent Sci 9: 000391.
12. Nagaveni NB, Ashwini KS (20204) Impaction of primary molars in Indian children – a retrospective radiographic study and upgraded new classification system. Clin Radiol Imaging 8: 000217.
13. Nagaveni NB (2024) Permanent mandibular second premolar with unusual morphology in association with other dental variations – report of a rarest case. J Dent Res Treat 1: 1-8.
14. Nagaveni NB, Mahantesh SP, Hegde S Umashanakara KV (2025) "Paramolar-Wanderung" in association with idiopathic congenital oligodontia of permanent teeth – a rarest case report. Int Clin Case Rep Review. BioRes Scientia Publisher 3: 1-5.
15. Goksel S, Agirgol E, Karabas HC, Ozcan I (2018) Evaluation of prevalence and positions of mesiodens using cone-beam computed tomography. J Oral Maxillofac Res 9: e1.