

## Multiple Supplemental Supernumerary Premolars- A Case Report

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### **Abstract**

*Supernumerary teeth are the teeth that are present in addition to the normal set of teeth. They can be present in any region of the oral cavity be it maxilla or mandible and anterior or posterior region. Their occurrence is more in male compared to the females. They may be a few complications with the supernumerary teeth like crowding, root resorption of adjacent tooth, midline diastema etc. Not every time they can be the cause of some inconvenience but sometimes they are and for that they have to be kept under observation. When we talk about treatment there is no set guideline. We can go for extraction if they are causing some problem but if they are not then extraction can be avoided and tooth can be kept under observation. Case report talks about the supernumerary premolars and their management as they are fully developed and erupted into the oral cavity.*

**Keywords:** *Supernumerary teeth, Extra premolar, Supplemental premolars, Non syndromic supernumerary.*

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### **I. Introduction**

A supernumerary or hyperdontia tooth describes as excess in teeth number which can occur in both the primary and permanent dentition.[1] It can also be defined as “any tooth or odontogenic structure that is formed from tooth germ in excess of usual number for any given region of the dental arch”.[2] Its prevalence is higher in males than females.[3] They can be in primary or permanent dentition, maxillary or mandibular teeth, anterior or posterior teeth.[4] They may or may not be associated with syndromes.[5] There can be many complications associated with supernumerary teeth like crowding, cyst formation, midline diastema, root resorption etc. These all can be prevented by timely extraction of the supernumerary tooth.[6] But all cases don't necessarily go for extraction. If the supernumerary have been erupted and are not causing any complication then they can be left there as seen in mentioned case.

### **II. Case Report**

A 30yr old male patient reported to dental clinic with chief complaint of decayed tooth. Patient complains that he is having food lodgment in lower left back tooth region since 2 months. No relevant medical history was there. Also no extra deformity was seen. On intraoral inspection, he was found to have supernumerary premolars in mandibular region bilaterally. Regular set of teeth were present with four permanent supernumerary premolars present lingual to the existing premolars. Morphology of these supernumerary premolars showed no variation from the permanent premolars and may thus be called as supplemental premolars. Supplemental premolar lingual to 35 was carious. Also 47 had class I caries. Intraoral periapical radiograph of both sides were done to rule out any pathology. Orthopantomogram was done to see for any associated pathology or any impacted supernumerary teeth. No abnormal finding was there in radiographs and the supernumerary were of normal shape and size. From the history, general examination, extraoral and intraoral examination the diagnosis was made as non syndromic supplemental premolar teeth. The supplemental tooth had no pain so it was decided to go for restoration. Restoration with glass ionomer cement was done in supplemental tooth and composite restoration was done in 47. Patient was educated about the cons of crowding and the increased chances of food impaction. Patient was advised to lay special interest in tooth brushing in this region and use dental floss and pay visit to dental clinic every six monthly.



**Fig 1- Front view showing teeth in occlusion**



**Fig 2- Lateral view showing teeth in occlusion**



**Fig 3- Supernumerary premolars present lingual to existing premolars**



**Fig 4- Intraoral periapical radiograph of supernumerary teeth**



Fig 5- Maxillary and mandibular casts of the patient

### III. Discussion

**Epidemiology-** Koch *et al.* stated that the prevalence of supernumerary teeth in the permanent dentition is 1-3% and the prevalence in primary dentition according to Primosch is 0.3-0.6%. Rajab and Hamden found the prevalence in the primary dentition as 0.3-0.8% and in the permanent dentition as 0.1-3.8%. [7] There was higher prevalence in mongloids than other races. [6]

**Etiology-** There are many genetic and environmental causes. They are-

a) **Atavism-** It is the reappearance ancestral feature in homo sapien. Supernumerary has been considered one among such feature. Due to evolution number and size of teeth has been reduced but in rare cases atavism may appear. [8]

b) **Dichotomy-** It is the division of a tooth bud into two which may be of same or different size. [9]

c) **Dental lamina hyperactivity theory-** It is one of the most accepted theory which says that hyperactivity of dental lamina forms supernumerary teeth. Supplemental are formed from the lingual extension of dental lamina and rudimentary arise from the proliferation of dental lamina induced by pressure of the permanent dentition. [10]

d) **Genetic** – Studies have shown that supernumerary have genetic cause with increased number evident in relatives of those affected. [6]

e) **Associated with syndrome-** Studies have shown that supernumerary have been seen in many syndromes namely Cleidocranial dysplasia [11], Ehlers-Danlos syndrome Type III [12], Ellis-Van Creveld syndrome [13], Gardner’s syndrome [14], Goldenhar syndrome [15], Hallermann-Streiff syndrome [16] Orofaciodigital syndrome type I , Incontinentia pigmenti, Marfan syndrome, Nance Horan syndrome, and Trichorhinophalangeal syndrome 1 and also have been reported in conditions like cleft lip and/or palate [6].

**Classification-** They can be classified on basis of location, morphology, orientation and position as in fig 6. [6]

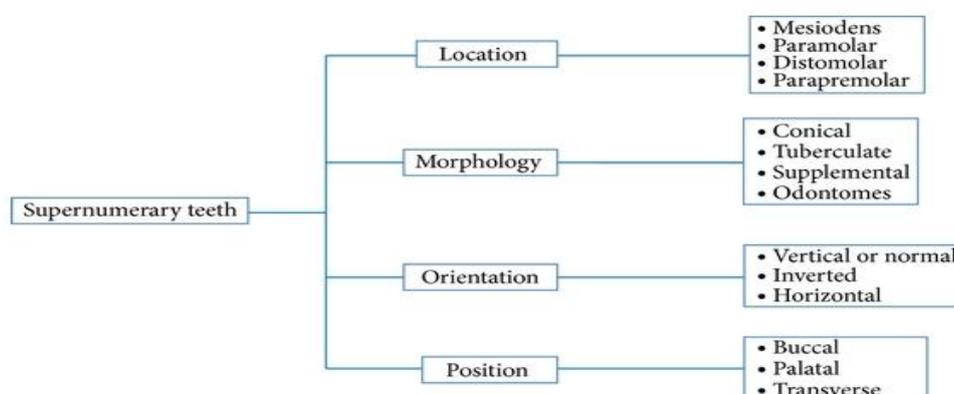


Fig 6- Classification of Supernumerary teeth [6]

**Complications** – There are many complications associated with supernumerary teeth. Most important are delayed or failure of eruption, displacement, crowding, midline diastema, ectopic eruption, root abnormality, cyst formation etc. [6]

a) **Midline diastema** – Presence of mesiodens be it erupted or unerupted leads to medline diastema. [7]

b) **Delayed or failure of eruption-** Supernumerary can cause hindrance in path of eruption of permanent tooth leading to failure in its eruption. [7]

- c) Crowding – Supernumerary very commonly leads to crowding by decreasing the space required for eruption of permanent teeth.[6]
- d) Ectopic position – There are chances that they erupt at unusual location. Supernumerary in the nasal cavity has been reported.[6]
- e) Cyst formation- Presence of cyst with supernumerary teeth has been seen in 11% of the cases.[6]
- f) Dilaceration- A sharp bend can be seen in the root of permanent tooth because of the presence of supernumerary.[7]

**Treatment** - There has been different opinion by different authors regarding the treatment of supernumerary teeth. It depends on the case and if there are any chances of complication in the near future. Also if extraction is the choice of treatment then nearby teeth should not get damaged during the procedure. So it depends on wise decision of the clinician. Fig 7 shows how to proceed with the treatment.[7]

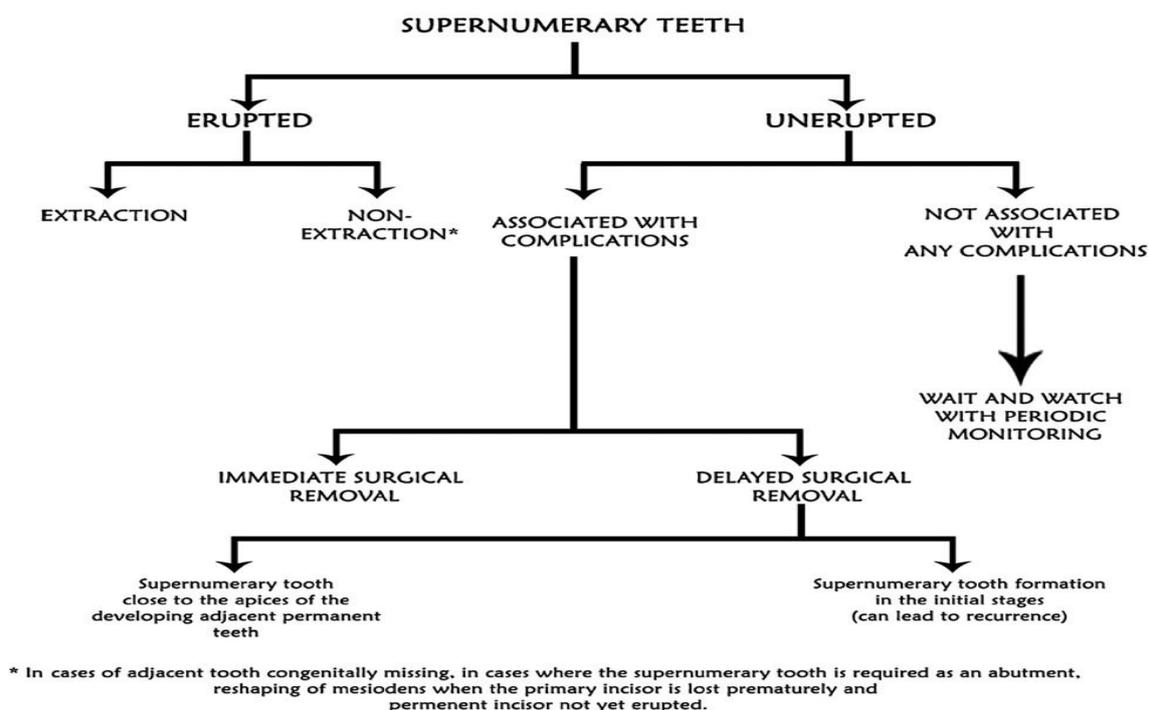


Fig 7- Treatment choice for supernumerary teeth [7]

#### IV. Conclusion

Supernumerary teeth are just extra teeth that can be seen more in males than females. It can be seen in any segment of dentition. Timely diagnosis and management is of importance as if neglected may lead to some complication. These complication are not always there but keeping the tooth under observation to avoid any complication will be the best approach. If clinician feels that it may be causing any harm or leading to any complication then extraction of the supernumerary can be done.

#### CONFLICT OF INTEREST

The author has none to declare.

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