

Supernumerary Tooth: A Case Report & Review of Literature

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ABSTRACT

Supernumerary tooth is a developmental anomaly. They can be seen as erupted or embedded in the alveolar bone. They are classified based on their shape, size and location and can be diagnosed clinically or radiographically. These are most commonly seen in maxillary anterior region. Their management varies according to their position. This article overviews a case report in maxillary anterior region.

Key words: Supernumerary tooth, maxilla, radiograph.

INTRODUCTION

A supernumerary tooth is one that is an additional to the normal series and can be found in almost any region of the dental arch^{1,3}. Occurrence may be single or multiple, unilateral or bilateral, erupted or impacted and in one or both jaws^{1,2}. Permanent dentition is more affected than the primary dentition. Males show twice more prevalence than females with predominance of maxilla.

Case report

An 18 year old male patient reported to the department of Oral medicine & Radiology in Tagore dental college & Hospital, with a chief complaint of deposits in his teeth. Medical & family histories were non contributory. The face appeared bilaterally symmetrical with no palpable lymph nodes. Intra-oral examination revealed labially erupted 11, 21 and two supernumerary teeth seen in palatal aspect of 11, 21(Figure 1). The teeth were conical in shape. The other relevant findings are crowding of lower anterior with grade I calculus & stains.

Radiographic interpretation: Maxillary Occlusal radiograph shows two radiopaque structures resembling permanent tooth in the palatal aspect of 11, 21 (Figure2) which are conical in shape with reduced size.

The surgical removal of supernumerary teeth in relation to 11, 21 were advised, and advised for oral prophylaxis & orthodontic treatment.

DISCUSSION

It is essential not only to enumerate but also to identify the supernumerary teeth present , clinically and radio graphically before a definitive diagnosis & treatment plan can be formulated².

Different theories suggested as the reason behind the occurrence of supernumerary teeth, but still it remains unclear, such as Phylogenic theory [Smith, 1969], Dichotomy theory [Liu, 1995], a hyperactive dental lamina [Primes, 1981: Brook, 1984] & combination of genetic & environmental factors [Brook, 1984]¹.



Fig. 1: Shows two supernumerary teeth in maxillary anterior teeth region



Fig. 2: Shows two supernumerary teeth in the palatal aspect of 11 and 21

The “Phylogenetic Theory” relates to the phylogenetic process of atavism. Atavism is the return to or the reappearance of an ancestral condition. The Dichotomy Theory is where a supernumerary tooth occurs as a result of complete splitting of the tooth bud. A hyperactive dental lamina theory suggests that supernumerary teeth are formed as a result of local, independent, conditioned hyperactivity of the dental lamina. A combination of genetic and environmental factors suggests supernumerary teeth are more common in the relatives of affected children than the normal population. Males more affected than females

Supernumerary teeth are classified according to the number, morphology & location.

1. Number- Single or Multiple,
2. Morphological [Tomes-1873]
 - Conical, tuberculation, downtime, infundibuliform,
3. Location- mesiodens, paramolar, distomolar
4. Position- normal, inverse, transverse, ectopic.

Investigation³

1. OPG is more useful & its shows anterior maxilla & mandible in the form of Occlusal or Periapical radiographs. It also possibilities of root desorption of permanent teeth caused by a supernumerary tooth
2. Parallax method- to localize an interrupted supernumerary or permanent tooth. Parallax is apparent movement of an object against a background caused by a change in observer position with root of an adjacent

tooth as a reference point.

3. CBCT- gives detailed three dimensional images of local structures
4. IOPA- most detailed assessment
5. Occlusal radiograph

Complications

- a) Prevent or delay the eruption of associated permanent teeth
- b) Displacement or rotation of permanent teeth
- c) Crowding
- d) Incomplete space closure during orthodontic treatment
- e) Dilacerations, delayed or abnormal root development
- f) Root desorption of adjacent teeth
- g) Cystic formation

Medical conditions associated with supernumerary teeth

- i. Cleft lip & palate
- ii. Cleidocranial dystopias
- iii. Gardener’s syndrome
- iv. Ferry Anderson’s syndrome
- v. Ehlers-Dandles syndrome
- vi. Trico-Rhiro_phalangeal syndrome

Management^{3,7}

- 1) The first & foremost management is the localization & identification of the tooth & its associated complication
- 2) If teeth are causing no harmful or no hindrance to the orthodontic treatment, the can be monitored with yearly radiographic review

- 3) If they are associated with roots of permanent teeth, it is advised to await full root development before extraction to minimize the chances of root damage
- 4) If associated with complications, surgical removal of tooth is advised
- 5) The supernumerary tooth has to extract as early as possible to avoid the delayed eruption of permanent tooth, to avoid speech difficulties, to avoid further cystic changes & traumatic injuries.

CONCLUSION

Supernumeraries are relatively common and can cause a variety of complications. Approximately 75% are asymptomatic and impacted. Most are diagnosed coincidentally during a radiographic examination. Early diagnosis is important to minimize the risk. This may include referral to pedodontist, orthodontist or oral surgeon.

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