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BILATERAL NON SYNDROMIC NON FAMILIAL SUPERNUMERARY TEETH IN MIXED DENTITION - A RARE CASE

Dentistry

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ABSTRACT

Supernumerary teeth is any tooth or odontogenic structure which occurs an 'excess' from normal dentition. They are classified based on form, morphology, location, and occurrence. In some cases, they may disrupt the normal integrity of dentition while in some cases, its presence is accepted as a part of normal dentition. The prevalence rate varies according to various parameters. Non syndromic non familial bilateral pattern in the anterior region is a rare occurrence. A regular thorough clinical examination with radiographic assessment can help to get to better conclusions with such cases, in time.

KEYWORDS

supernumerary teeth, conical type, non syndromic

INTRODUCTION

Supernumerary tooth (ST) is defined as a tooth or a structure resembling tooth which forms from dental lamina in addition to the normal dental formula. Its prevalence can be both in the maxillae and/or mandible, unilaterally or bilaterally, solitary or in multiples, erupted or unerupted. [1] Generally, it is seen to be associated with syndromes, however, non syndromic cases are also seen.

Supernumerary teeth were classified based on form as conical, tuberculate, supplemental, and odontoma, and based on location as mesiodens, paramolar, distomolar, and parapremolars. (Scheiner & Sampson).[2] Supernumerary teeth in the permanent dentition can pose various problems like impaction, rotation or overcrowding of the teeth near to the supernumerary teeth, periapical resorption of permanent teeth, delayed or ectopic eruption, follicular cysts may also form.[3]

However, in some cases, removal can be avoided namely, when satisfactory eruption of related teeth has occurred, active orthodontic treatment is not required,absence of associated pathology, no hinderance in occluding or chewing or when removal would sacrifice the relative tooth's vitality.[4]

Knowledge of the type, position, and possible complications, as detected clinically and radiographically, help in planning proper management of supernumerary tooth.[5]

The given article represents a rare case of bilateral non syndromic non familial supernumerary teeth in patient with mixed dentition.

CASE REPORT

A 9 year-old female patient visited to The Department of Pediatric and Preventive Dentistry, Kothiwal Dental College And Research Centre, Mordabad, Uttar Pradesh, with chief complaint of inability to close mouth properly due to presence of teeth inthe upper arch behind permanent upper centrals. Her medical and family histories were insignificant. Thorough clinical examination revealed,no relation to any syndrome.Intraoral examination revealed mixed dentition with palatally placed supernumerary teeth behind 21. (Figure 1).

Figure 1- mixed dentition with palatally placed supernumerary teeth behind #21

A conical tip of the supernumerary teeth was visible in the oral cavity irt #21. Radiological investigation was advised to determine the root orientation and exact length of the teeth. IOPAR confirmed the presence of bilateral supernumerary teeth at similar location i.e behind #11, which was unerupted in oral cavity, at that time. (Figure 2)

Figure 2- bilateral supernumerary teeth seen on IOPAR, behind #11, #12

Both the supernumerary teeth were vertically oriented. Extraction was advised for the erupted teeth to overcome the hinderance caused in occlusion. The unerupted tooth on opposite side was kept on follow up. After 2 months, the contralateral supernumerary tooth erupted behind #11 and the patient came up with the same complaint.

The treatment plan was extraction of both the teeth, considering the uncomplicated vertical root placement, length and other factors.

The type of supernumerary tooth could not be identified when examined in oral cavity, while after extraction, both teeth were confirmed clinically as conical type of supernumerary teeth. (Figure 3) (Figure 4)

Figure 3- extracted conical supernumerary i.r.t 21 with curved intact formed root; extracted on initial visit

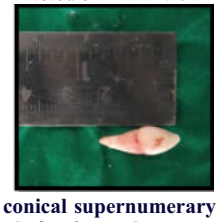

Figure 4- extracted conical supernumerary i.r.t 11 with straight formed root; extracted after 2 months on eruption.

Post extraction, the patient was able to occlude properly and follow up was done after 2 month to check for any recurrence or anomaly, later after 8 months. (Figure 5)

Figure 5- normal occlusion, follow up done after 8 month.

DISCUSSION

Small peg-shaped conical tooth is a type of supernumerary tooth most commonly found in the permanent dentition. It develops with root formation ahead of or at an equivalent stage to that of permanent incisors. The conical supernumerary rarely delays eruption.[4]

Etiology of supernumerary teeth is multifactorial. According to Anthonappaet al. atavism, dichotomy, hyperactivity of the dental lamina, heredity, progress zone theory and unified etiology are some of the concepts behind presence of supernumerary teeth.[6] Several signaling molecules are involved to control the development of tooth germs, including bone morphogenetic protein (BMP), fibroblast growth factor (FGF), tumor necrosis factor (TNF) and molecules of the sonic hedgehog (Shh) and wingless-related (Wnt) pathways. Any up or down regualation in these, result in anomalies of teeth.[7] Szu-Ting Chou et al. did a study and claimed prevalence rate of , amongst the Erupted teeth, 61.76% of supernumeraries were located within the arch, 22.22% of supernumeraries located buccally/labially, and 13.79% of supernumeraries located palatally/lingually.[8] Sharma and Singh confirmed in his study of 81.2% of the supernumerary teeth in the central incisor region, in the age group of 4-14 years.[9]Furthermore, it is seen that, supernumerary teeth occur in the midline region more often,in males, while incisor region supernumerary teeth are more common in females.[10]No sufficient literature has summarized the best time to remove unerupted supernumerary teeth.[5]However,based on the retrospective analysis, Omer et al. suggested the optimal time for the removal of supernumerary teeth to be 6 to 7 years , considering the fact of minimal disturbances to the adjacent teeth during removal at this time.[11] In 2015, studies claimed Lrp6 mutant to be associated to non syndromic supernumerary teeth.[12]Hence, extraction of supernumerary teeth is a cautious decision. According to Hogstrom and Andersson, supernumerary teeth either should be removed as early as it is identified or after completion of the adjacent tooth's root formation.[13] Odontome is a differential diagnosis of supernumerary teeth. In our case, the diagnosis was confirmed as conical supernumerary teeth according to its morphological features, as none of the calcified extracted teeth had features of odontomes.[14]

CONCLUSION

It is imperative to have a regular checkup done and conduct, intra-oral examinations with radiographic confirmation, during the follow-up after supernumerary teeth extraction.

There are chances of recurrence of supernumerary teeth. Possible erason could be that, dental lamina is incompletely resorbed which gets reactivated. However in our case report, no recurrence rate is seen.

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