SUPERNUMERARY MAXILLARY CANINE WITH TALON’S CUSP: REPORT OF A RARE CASE

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ABSTRACT
Development of tooth is a dynamic process where the final form and structure of the tooth is achieved by the continuous interplay of physiological and morphological stages. Interference in any of the above mentioned process will result into diversity in tooth size, shape and number. A very rare case comprising multiple dental anomalies in one tooth; unilateral supernumerary tooth with Talon’s cusp in the maxillary canine region and its management is presented in this report. This case involves a 13-year old female with Supernumerary Tooth with Talon’s cusp on left side located in palate region. Management of such case becomes important because if it remains embedded, it may cause disturbance to the developing tooth, aesthetic and/or functional concerns especially if it is situated in the maxillary anterior region.

KEYWORDS: Supernumerary tooth, Dental Anomaly, Talon’s cusp, Supplemental tooth, Tooth Development

INTRODUCTION
Development of tooth is a dynamic process where the final form and structure of the tooth is achieved by the continuous interplay of physiological and morphological stages. Interference in any of the above mentioned process will result into diversity in tooth size, shape and number. In terms of altered number in can take place as either presence of additional or missing tooth; which can be termed as Supernumerary Tooth(ST) or anodontia respectively. Prevalence of supernumerary teeth in the primary dentition is 0.3% - 0.8% and is 1.5% - 3.5% in the permanent dentition. Countless research is done to find exact etiology for occurrence of supernumerary tooth; however, confirm etiology is not available till date. Having said that, the most probable reasons for occurrence of such anomaly can be; the phylogenetic process of atavism and the dichotomy of the tooth bud, localized and independent hyperactivity of the dental lamina, which presumably leads to the formation of additional tooth germs. 

Occurrence within the same family is commonly reported which suggests the genetic involvement. Influence of genetic factor can be determined by occurrence of supernumerary teeth in monoyzygotic twins. In addition, it is also believed that alteration can be due environmental factors. Occurrence of ST is most common in Maxillary midline (mesiodens), followed by maxillary lateral incisors, and mandibular third premolars. There is no sex predilection for occurrence of Supernumerary tooth in primary dentition; however, males are affected approximately twice as frequently as females in the permanent dentition.

ST can be classified according to their location in the dental arch: mesiodens, paramolar and distomolar or according to their morphological forms: conical, tuberculate, supplemental and odontome. Primosh (1981) classified supernumerary into two types according to their shape as supplemental (eumorphic) and rudimentary (dysmorphic). The ST position can be recorded as ‘between central incisors’ and ‘overlap’ and its orientation can be described as ‘vertical’, ‘inverted’ and ‘transverse’. If a supernumerary primary tooth is present clinically, a supernumerary permanent tooth is often evident radiographically. Common problems associated with mesiodens are
related to altered growth and development in the area. Squeal to occurrence of supernumerary tooth include over-retention of primary teeth, impaction or delayed eruption of permanent teeth, dilacerations or abnormal root development, and/or abnormal crowding or spacing of the anterior teeth. There are other problems as well such as root resorption of adjacent teeth, dentigerous cyst formation, and nasal eruption of Inverted Supernumerary Tooth however they are less frequent.16

**CASE PRESENTATION**

Thirteen year-old girl patient had reported to the Department of Paedodontics and Preventive Dentistry with a chief Complain of malaligned maxillary anterior teeth. Upon on history examination no relevant medical or dental family history was present. Extra oral examination showed incompetent lips and 4 to 5 mm anterior open bite (fig 1). The Intra oral examination revealed upper anterior crowding with altered overjet and over bite measurements. Examination also revealed presence of an additional tooth palatal to upper left canine (fig.2). Clinical examination also showed carious lesions. Provisional diagnosis of eumorphic Supernumerary tooth was given.

**INVESTIGATION:**

Orthopentomogram (OPG) radiograph was taken in order to confirm the provisional diagnosis and localise supernumerary tooth to assess the potential need for surgical approach. OPG showed the palatal position of supernumerary teeth to left maxillary canine region (fig.3).

**TREATMENT:**

A treatment plan includes oral prophylaxis followed by restorations of carious lesions and extraction of supernumerary tooth. Extraction of supernumerary canine was carried out under Local Anaesthesia. The supernumerary tooth was measured 16 mm in length with the anatomy similar to permanent canine (Fig.4). The patient tolerated the procedure comfortably. Postoperative pain was controlled with a paediatric dose of suitable analgesic. At the one-month recall, satisfactory healing of the extracted tooth socket was seen with no postoperative complications. Along with that shedding of maxillary right second molar has occurred. (Fig 5). Patient was than referred to Dept of Orthodontics for further needful treatment of anterior open bite and incompetent lips.
DISCUSSION

Occurrence of a supplemental tooth is very rare. According to Rajab and Hamdan, only 6.9% of the studied sample was found to have supernumerary teeth with a normal crown shape. Also, only 1.5% were located in the maxillary canine region and 4% were located in the mandibular premolar region. Therefore, the occurrence of supernumerary teeth in the maxillary canine region of the present case appears to be extremely rare. The occurrence of supernumerary maxillary right canines in both dentitions (53s and 13s) of a 9-year-old girl was reported by Cruz and Campos. The rare case of a 12-year-old boy presenting bilateral supernumerary permanent maxillary canines (13s and 23s) of normal shape and size without suffering from any systemic disease or syndrome was described by Türkkahraman et al. A case of 2 supernumerary teeth with a normal crown shape. Also, some authors claim that other than being monitored periodically, asymptomatic supernumerary teeth which do not affect the dentition are not necessary to be extracted. In accordance to Neville BW, after necessary investigations of the present case, the supernumerary tooth was extracted immediately in order to avoid orthodontic complications in the future and to correct already present orthodontic problem such as anterior open bite and crowding. Adequate force exerted by buccal musculature on extraction of supernumerary palatally placed canine resulted in buccally placed 13 to come into the arch alignment. Thus it is possible to conclude that through early diagnosis and treatment, the child and his family were enabled to solve the problem without traumatic surgical procedures or corrective orthodontic treatment, based on the literature and the case described herein. This report aims to help other professionals dealing with similar cases.

REFERENCES