

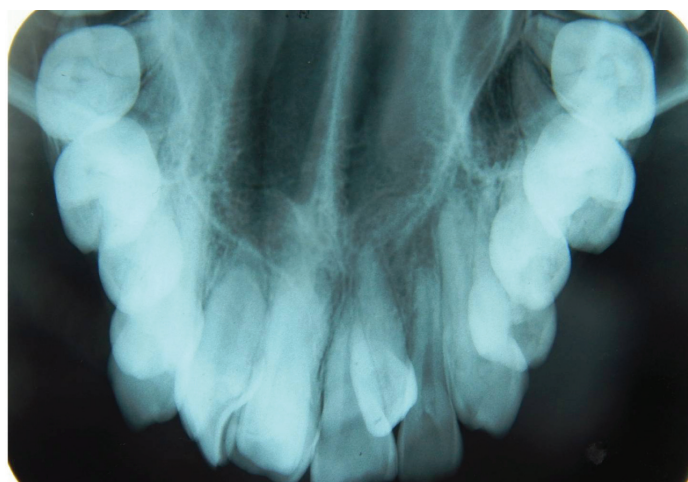
Bilateral Supplemental Maxillary Incisors with Both Dens Invaginatus and Dens Evaginatus in a Non Syndromic Patient: A Rare Case Report

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A 13-year-old boy was reported with complaint of unaesthetic look due to crowding of teeth. Family and medical history was non contributory. Intra oral examination revealed presence of multiple supernumerary anterior teeth resulting into crowding [Table/Fig-1,2]. Clinical and radiographic (occlusal and orthopentamograph) [Table/Fig-3,4] examination confirmed the presence of erupted bilateral three supernumerary (supplemental) teeth resembling one central and two lateral incisors teeth in maxilla in non syndromic patient. Radiographically left central incisor presented with both dens invaginatus and dens evaginatus which is uncommon anomaly [Table/Fig-5]. Clinically all supplemental and permanent incisors were visible in the oral cavity. Two supplemental lateral incisors were palatally placed and supplemental central incisor was rotated. Treatment was planned to extract all supplemental teeth followed by orthodontic correction of spacing and diastema. Upon surgical



[Table/Fig-3]: Orthopentamograph showing supplemental teeth



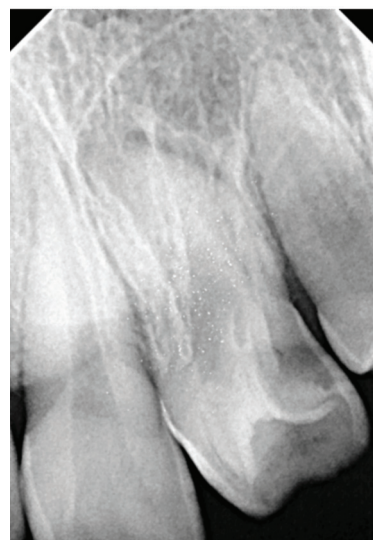
[Table/Fig-4]: Maxillary occlusal radiograph showing supplemental teeth



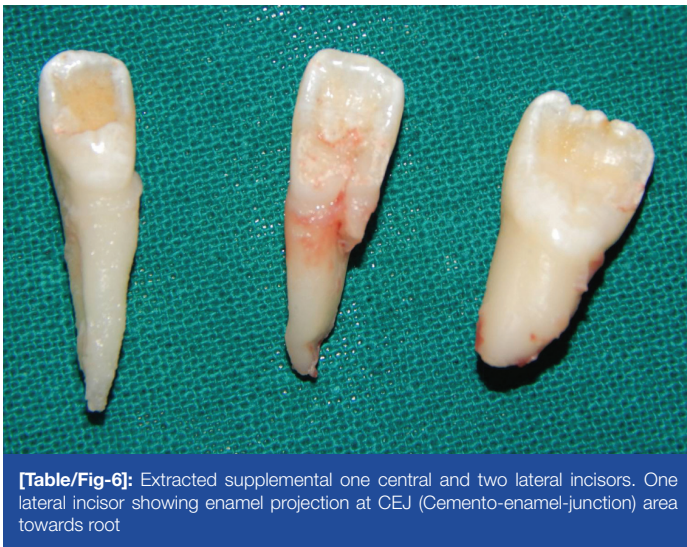
[Table/Fig-1]: Intra oral photographs showing rotated supplemental central incisor and lateral incisor on left side of maxilla



[Table/Fig-2]: Photograph of maxillary arch showing palatally placed supplemental lateral incisors on left and right side and rotated supplemental central incisor



[Table/Fig-5]: Intra oral periapical radiograph of maxillary anterior region showing central incisor with dense invaginatus and dens evaginatus



Table/Fig-6: Extracted supplemental one central and two lateral incisors. One lateral incisor showing enamel projection at CEJ (Cemento-enamel-junction) area towards root

extraction of supplemental teeth, supplemental lateral incisor showed enamel projection at cemento-enamel junction (CEJ) on proximal side for about 2.5 mm, which is uncommon [Table/Fig-6]. The patient didn't turned up on follow up for the management of chief complaint.

Teeth present in excess of normal series of dentition are called as supernumerary teeth or hyperdontia. The term supplemental tooth was first used by Tomes, which refers to an extra tooth resembling a tooth of normal series of dentition [1]. Supernumerary teeth can occur either unilaterally or bilaterally, in permanent or primary dentition and in maxillary or mandibular region [2]. Various theories have been proposed to explain possible aetiology such as atavism, dichotomy theory and dental lamina hyperactivity theory [2].

Dens evaginatus (DE) is a rare developmental anomaly characterized by formation of additional cusp that extends from the cemento-enamel junction to the incisal edge. This accessory cusp comprises of enamel and dentin with varying amount of pulp tissue. DE usually occurs on occlusal surface of premolars or as lingual projection of anterior in both primary and permanent teeth. Dens invaginatus (DI) is a developmental anomaly caused by invagination of the surface of the tooth crown before calcification has occurred. DI is a rare malformation of tooth, where affected teeth radiographically show an infolding of enamel and dentin that may extend into the pulp [3]. Both DE and DI occur during morphodifferentiation stage of tooth development. Aetiology of DE is multifactorial [4]. Dens evaginatus and dens invaginatus are usually present in isolation [3]. Concomitant occurrence of both dense evaginatus and invaginatus in same tooth is extremely rare as seen in our case. Similar case was reported by Kiswani and Gehlot et al., DE and DI pose a challenge

by stagnation of food, caries, pulpal pathosis, periodontal problems, occlusal discrepancies and esthetics problems. Hence, early occlusal investigated thoroughly. Early diagnosis is mandatory since adjustments may be required to eliminate any pulpal involvement of teeth, with coronal premature contact [3,4].

Clinical, morphological and radiographic examination and counting the dentition helps in differentiating supernumerary from normal dentition. Bilateral supplemental central and lateral incisors in maxilla are uncommon as seen in our case. One of supernumerary tooth in our case presented with enamel projection at cemento-enamel junction which is uncommon [Table/Fig-6]. On radiographic examination, left central incisor presented with both dens invaginatus and dens evaginatus. Most of the time supernumerary teeth are asymptomatic and are diagnosed on routine examinations. Radiographic images helps in diagnosing the impacted supernumeraries and helps in differentiating supplemental with normal one. Cone shift technique or CBCT can be used to identify exact location of the supernumerary teeth. Supernumerary incisors may cause various problems such as, diastema, delayed eruption of the permanent teeth, displacement, malocclusion, rotation of adjacent teeth, dilaceration, abnormal root development, root resorption of adjacent teeth. It can create various complications such as, cyst formation, ectopic eruption (migration into nasal cavity or maxillary sinus) [1,2].

Management of tooth with DE include preservation of pulp vitality, meeting esthetic and occlusal requirement, establishing caries prevention or eradication of developmental grooves and eliminating tongue irritation [3]. Management of supernumerary teeth depends on developmental stage of tooth and relation to adjacent normal dentition. It has been suggested by several researchers that it has to be removed as soon as it has been observed. Erupted supernumeraries should be extracted and unerupted supernumeraries associated with any complications should be surgically removed or can be kept under observation until eruption if asymptomatic [1]. In the present case all erupted supplemental teeth were removed without any complications. Unfortunately patient didn't turn up on recall visit to plan orthodontic correction.

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