A rare non-syndrome case of concomitant multiple supernumerary teeth and partial anodontia

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Concomitant hypo-hyperdontia is an uncommon condition of coexistence of partial anodontia and supernumerary teeth. Its etiology is still unknown. Very few cases have been reported in the literature of this condition. Presented here is a rare and first such case of simultaneous presence of multiple supernumerary teeth and a missing tooth (canine) without any associated systemic conditions or syndromes involving both jaws.
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INTRODUCTION

Concomitant hypodontia (partial anodontia) and hyperdontia (supernumerary teeth) is a very rare condition of mixed numerical variation of the human dentition. It is found more often in the permanent dentition than in the primary or mixed dentition.[1] The etiology of simultaneous hypo-hyperdontia is unknown. Disturbances in migration, proliferation and differentiation of the neural crest cells and interactions between the epithelial and mesenchymal cells during the initiation of odontogenesis have been suggested.[1,2]

To date only a few case reports of this condition exist in the literature. Camilleri[3] reported a case of congenitally missing maxillary lateral incisors and presence of a midline supernumerary. While Munns[4] described a case of missing maxillary lateral incisors and a supernumerary upper left second premolar. Cases exhibiting absent premolars associated with a maxillary mesiodens were noted by Mercer,[5] Nathanail,[6] and Gibson.[7] Gibson also noted two cases of mesiodens and unilateral absence of maxillary lateral incisor. A similar case was reported by Brook and Winter.[8] Low,[9] reported a case where mandibular central incisors were absent and a midline supernumerary tooth formed. Jian[10] reported a case, which involved congenitally missing maxillary lateral incisors in the presence of a supernumerary tooth in the right mandibular first molar area. Spyopoulos *et al.*[11] emphasized the role of panoramic radiography and reported three cases of simultaneous presence of partial anodontia and a supernumerary tooth involving both maxilla and mandible. A combination of partial anodontia and multiple supernumerary teeth in both the upper and lower jaws prompted the presentation of this rare case report.

CASE REPORT

A twelve-year old female child reported to the department of Pedodontics and Preventive Dentistry with the complaint of retained upper primary teeth in the posterior region.

The family, medical and dental histories were noncontributory. General physical and extra-oral examination did not show any abnormality.

Intra-oral examination revealed a mixed dentition with the following erupted teeth: (Figures 1, 2, and 3)

17, 16, 55, 54, 53, 13, 12, S, 11	21, S, 22, S, 63, 64, 65, 26, 27
47, 46, 45, 44, 43, S, 42, 41	31, 32, S, 33, 34, 35, 36, 37

S = Supernumerary tooth

Five palatally / lingually erupted supplemental supernumerary teeth were seen in the anterior region (Figures 1 and 2). Marked displacement of permanent maxillary anterior teeth was seen along with plaque retaining areas in the anterior region of both jaws (Figure 3).

Radiographic examination of the case with the help of occlusal radiographs (Figures 4 and 5) and orthopentomogram (Figure 6) was done. It revealed retained deciduous teeth, namely:

55, 54, 53	63, 64, 65

Six impacted supplemental supernumerary teeth were seen in relationship to:

15, 14	24, 25
	34, 35

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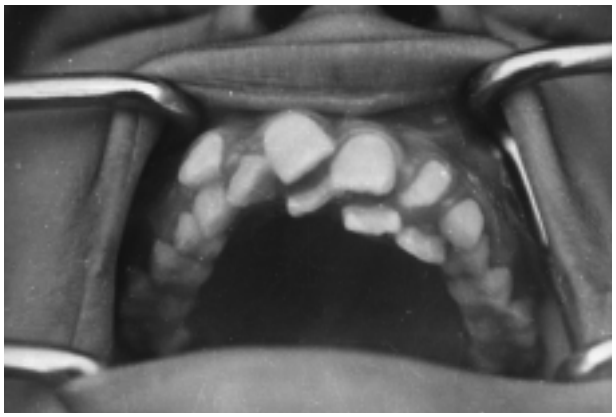

Figure 1.

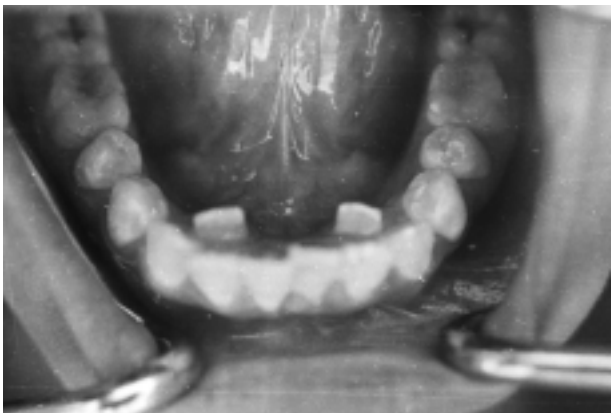

Figure 2.

Figure 3.

Left maxillary permanent canine was however, found missing (Figures 4, 6 and 7).

DISCUSSION

Multiple supernumerary teeth by itself is a rare condition[12] and often found in association with syndromes such as cleidocranial dysostosis, Gardner's syndrome or a cleft palate. Only a few reported cases of non-syndrome multiple supernumerary teeth show predilection to occur in the mandible and in premolar area followed by the molar and anterior region.[13] A large percentage of anterior supernumerary teeth remain unerupted (approximately 75%).[14] Partial anodontia usually affects the premolars, the upper lateral incisors and the third molars.[15]

To the best of knowledge, this is the first case reported with eleven excess number of teeth (five erupted supernumerary teeth in the anterior region and six impacted supernumerary teeth in the premolar region) in both the jaws along with unilateral congenital absence of maxillary permanent canine.

To ensure optimum function and esthetics an interdisciplinary approach between the pedodontist, orthodontist, oral surgeon and prosthodontist was recommended for the management of the case.

The six retained primary teeth and only four erupted supernumerary teeth were extracted. The erupted supernumerary tooth in relation to 22 was not extracted in order to finally covert it into a canine by placing a crown after orthodontically aligning it. The patient was kept on regular recall every three months but failed to visit for follow-up despite repeated reminders. However, it was planned to remove the impacted supernumerary teeth and to assist the eruption of permanent dentition by surgical exposure / orthodontic traction with intermittent monitoring periods. Still if any impacted permanent teeth failed to erupt, they were deemed for extraction and replacement to avoid complications like acute infections, cysts or tumor formation.

Figure 4.

Figure 5.

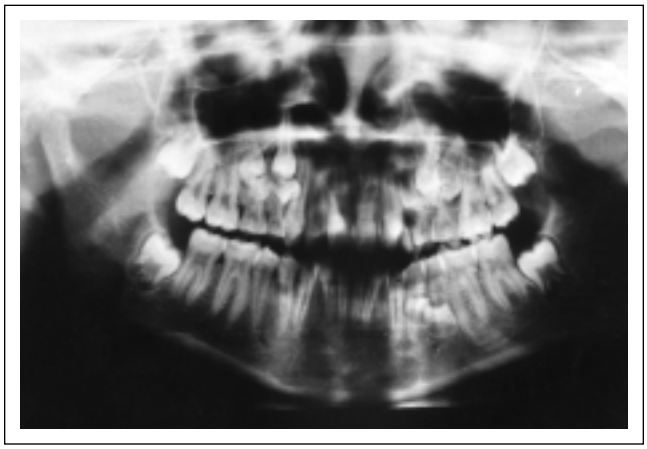

Figure 6.

Figure 7.

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