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Letter to Editor

Dentistry Section

A Rare Occurrence of Non-Syndromic Hypo-Hyperdontia in the Mandibular Anterior Region

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Hypodontia and hyperdontia are considered to be two opposite extremes in the development of the dentitions. Hypodontia is described as a congenital condition marked by a less than normal number of teeth; it is also termed as partial anodontia, whereas, hyperdontia is a condition of having teeth additional to the normal complement; it is also termed as supernumerary tooth. As far as hypodontia and hyperdontia are concerned these conditions are frequently encountered in the patients. But, only a few surveys have reported the occurrence of both numeric anomalies in the same individual [1]. Simultaneous occurrence of both partial anodontia (hypodontia) and supernumerary tooth (hyperdontia) in the same individual (hypo-hyperdontia) is a very uncommon condition. Especially, its occurrence in the mandibular anterior region is extremely rare. The aetiology of this condition is still vague. Gibson adopted the term "hypo-hyperdontia' to describe this condition [2]. Since then, the term "hypo-hyperdontia" has frequently been used to describe this condition.

Present case describes a rare condition of concomitant presence of single supernumerary tooth with missing both permanent central incisors teeth in the mandibular anterior region without any systemic condition or syndrome. A 21-year-old female reported to dental OPD of Department of Prosthodontics, Faculty of Dentistry, JMI, New Delhi, India, with the chief complaint of poor appearance due to abnormal shape and spacing in lower front teeth. She wanted the spacing in lower front teeth be corrected with artificial teeth. On intraoral examination, the absence of both mandibular central incisors and presence of a conical shaped small supernumerary tooth in the midline between permanent right and left lateral incisors i.e. teeth 32 and 42 (FDI notation) was noticed [Table/Fig-1,2]. The supernumerary tooth was placed slightly towards left side causing spacing of about 3mm with left and of about 4mm with right mandibular lateral incisor. When patient was asked she told that she never under went for extraction of teeth and never got trauma in orofacial region. Intra oral periapical radiograph of mandibular anterior region also revealed bilateral absence of the permanent mandibular central incisors. It also showed presence of a conical supernumerary tooth between mandibular lateral incisors [Table/Fig-3]. Close observation of morphology of the crowns of the mandibular incisors, absence of any space between incisors and canines and findings of intra oral periapical radiograph affirmed that the congenitally missing teeth were mandibular permanent central incisors. A diagnosis of non-syndromic mandibular midline supernumerary tooth with congenitally missing permanent mandibular central incisors i.e. non-syndromic hypo-hyperdontia in the mandibular anterior region was attained.

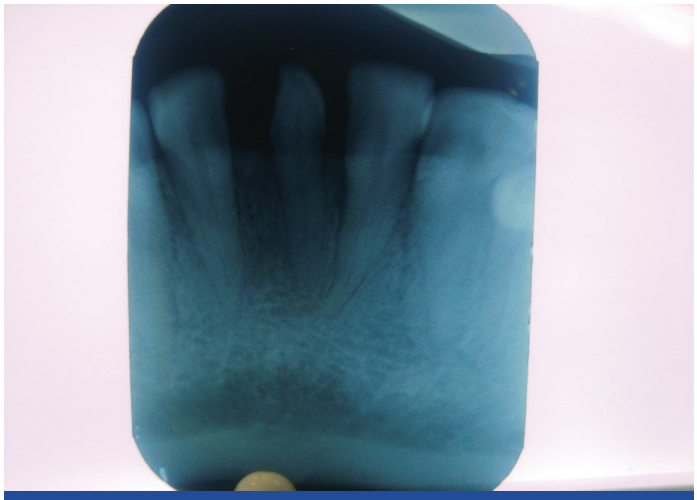
Patient was explained about the condition of her mouth. Diagnostic impression and diagnostic cast were made to make her better understand the condition of her mouth and all possible treatment modalities. She was explained all the possible treatment options to rehabilitate the mandibular anterior teeth for optimum function and aesthetics. The treatment options given to the patient were: (1) Extraction of the mandibular midline supernumerary tooth followed by placement of dental implants. (2) Extraction of the mandibular midline supernumerary tooth followed by fixed partial denture to replace 31 and 41. (3) Orthodontic movement of supernumerary tooth towards left mandibular lateral incisor and followed by fixed partial denture using supernumerary tooth and right mandibular lateral incisor as abutments to replace 41. (4) Orthodontic movement of supernumerary tooth towards left mandibular lateral incisor and followed by dental implant-supported single tooth replacement of 41.

Patient had apprehension of extraction and grinding of teeth; also she belonged to a low socioeconomic area. Hence, she refused the treatment as she had financial and time limitations. Complete scaling was performed and oral hygiene instructions were given.

Hypo-hyperdontia may affect both primary and permanent dentition and may involve the maxilla and the mandible. Concomitant occurrence of hypodontia and hyperdontia in the mandibular arch is a rare dental abnormality. The presence of this condition in the same area of mandibular anterior region is reported very rarely. As discussed by Nuvvula et al., [3] and Marya et al., [4], in our case report also the possibility of a microdont central incisor with the congenitally missing contra lateral mandibular central incisor cannot be eliminated. However, this tooth can not be considered as central incisor as the shape of the crown of this midline tooth is distinctively conical that does not resemble to normal central incisor and also in comparison to mandibular lateral incisors its root formation is reduced. The position of this tooth in midline and its conical shape favours the diagnosis of supernumerary tooth.

[Table/Fig-1]: Clinical photograph (frontal view) of mandibular arch showing supernumerary tooth in the midline and missing mandibular central incisors

[Table/Fig-2]: Clinical photograph (occlusal view) of mandibular arch showing supernumerary tooth in the midline and missing mandibular central incisors



[Table/Fig-3]: Intra oral periapical radiograph revealing presence of a conical supernumerary tooth in mandibular anterior region and bilateral absence of permanent mandibular central incisors

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