

Unilateral Molariform Macrodon Mandibular Second Premolar: An Unusual Case Report in A Nonsyndromic Patient

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ABSTRACT

Macrodonia is a rare dental anomaly that refers to teeth appears larger than normal. It can be generalized or isolated macrodonia. Isolated macrodonia involving premolar is very rare. This case report presents an unusual unilateral molariform macrodonia of mandibular second premolar.

Keywords: Isolated, Macrodonia, Molariform, Second premolar, Unilateral

CASE REPORT

A 14-year-old boy reported for routine dental check up. Patient's medical and family history was unremarkable. On intra oral examination, mandibular second premolar on left side showed macrodonia, which appear like molariform having multitubercular crown with 6 cusps, 3 on buccal and 3 on lingual sides which is extremely uncommon. The affected tooth was rotated due to large crown size and lack of space. There was a deep groove on occlusal table without any carious lesions. Both the mandibular first molars had 6 cusps i.e. 3 buccal and 3 lingual sides with normal crown and root shape and length [Table/Fig-1,2]. The macrodon premolar was measuring 10 mm mesiodistally and 8 mm bucco-lingually with total tooth length around 16 mm as compared to 22.5 mm for 1st premolar. Radiographic examination showed abnormal size and shape of crown with single tapering short conical root in relation to mandibular second premolar [Table/Fig-3].

DISCUSSION

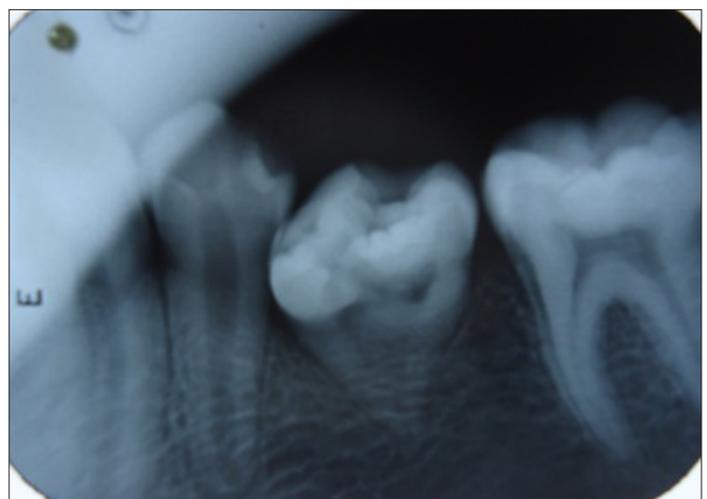
Anomalies in tooth structure, shape and size results by many factors during morphodifferentiation stage of tooth development [1]. Isolated bilateral macrodonia of mandibular second premolars is an extremely rare dental anomaly with only 10 reported cases till date where as unilateral macrodonia is also extremely rare as reported in our case. Dugmore proposed the term "macrodon molariform premolars" to macrodon premolars [2]. We suggest a term "molariform macrodon premolars" to teeth which are



[Table/Fig-1]: Photograph of mandible showing macrodon molariform second premolar on left side



[Table/Fig-2]: Photograph of mandibular cast showing macrodon molariform second premolar on left side and six cusps on permanent first molars



[Table/Fig-3]: Intra-oral periapical radiograph showing macrodon mandibular second premolar with conical root

multitubercular" as most suitable one. Macrodonia is usually associated with systemic disturbances or certain syndromes such as, insulin-resistant diabetes, pineal hyperplasia with hyperinsulism, facial hemihyperplasia, KBG syndrome, Otodontal syndrome, Ekman-Westborg and Julin trait syndrome, 47 XYY syndrome, Schinzel-Giedion syndrome, Dubowitz syndrome and Cockayne's

syndrome [1,3]. The present case reports an isolated macrodont second premolar in nonsyndromic patient.

Macrodon't teeth can create variety of functional and esthetic problems, depending on their size and morphology, which requires endodontic, prosthetic, surgical or orthodontic treatment [1]. Often macrodon't teeth are unable to erupt due to lack of space for eruption [2, 3]. Isolated macrodon't premolar teeth are also present in multituberculism as seen in our case. Due to anatomic variation and deep grooves, these teeth may be prone to caries [1, 3]. Most of the authors suggested extraction followed by orthodontic correction of malocclusion as a treatment strategy for isolated macrodon'tia with relation to premolars. Radiographic and clinical examination is helpful for early diagnosis and intervention [3].

CONCLUSION

Isolated unilateral macrodon'tia of the mandibular second premolar is an extremely rare dental anomaly, which requires multidisciplinary treatment approach.

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