

Case Report

Mesiodens- A Case Report

Kapil Jain¹, Amitabh Kallury², Ankur Chaukse³, Trilok Shrivastav⁴

¹ Postgraduate student in Dept of Orthodontics Peoples Dental Academy, Bhopal.

² Professor & Head Dept of Orthodontics Peoples Dental Academy, Bhopal

^{3,4} Reader, Dept of Orthodontics Peoples Dental Academy, Bhopal.

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ABSTRACT

Supernumerary tooth is a developmental anomaly and has been argued to arise from multiple etiologies. These teeth may remain embedded in the alveolar bone or can erupt into the oral cavity. When it remains embedded, it may cause aesthetic or functional problems specially if it is situated in maxillary anterior region. Mesiodens is a supernumerary tooth located in the anterior maxilla, placed palatally or in between the maxillary central incisors. It may be single or paired, erupted or impacted and at times even inverted.

INTRODUCTION

The term mesiodens was coined by Bolk (1917) to denote an accessory or superneumery tooth situated in between the maxillary central incisors^{1,2}. It is usually a small tooth with a cone or peg shaped crown and a short root. The presence of a mesiodens should be suspected if there is a delayed eruption of the permanent incisors or if the central incisors are displaced or exhibiting space^{3,4,5}.

Most of the problems associated with mesiodens are related to alter growth and development in the area. Common sequelae comprises of overretention of primary teeth, impaction or delayed eruption of permanent teeth, dilacerations or abnormal root development of the maxillary incisors and/or abnormal crowding or spacing of the anterior teeth. Other less frequent problems include root resorption of adjacent

teeth dentigerous cyst formation and nasal eruption of superneumary teeth.^{3,6,7,8}

Superneumary teeth / hyperdontia are the teeth that exceed the normal dental formula, independent of their location and form. A mesiodens is a superneumary tooth located in the maxillary central incisor region. The overall prevalence of mesiodens is between 0.15% to 1.9%.^{3,9} Superneumary teeth may occur as cleidocranial dysplasia, Gardner's syndrome, cleft lip & palate etc¹⁰.

Mesiodens can occur individually or as multiples and often do not erupt.³ According to Asaumi JI et al the number of superneumary teeth was one in 146 cases (73%), two in 52 cases (26%) and three in 2 cases (1%).



Fig. 1 Pretreatment intraoral photographs



Fig. 2 OPG

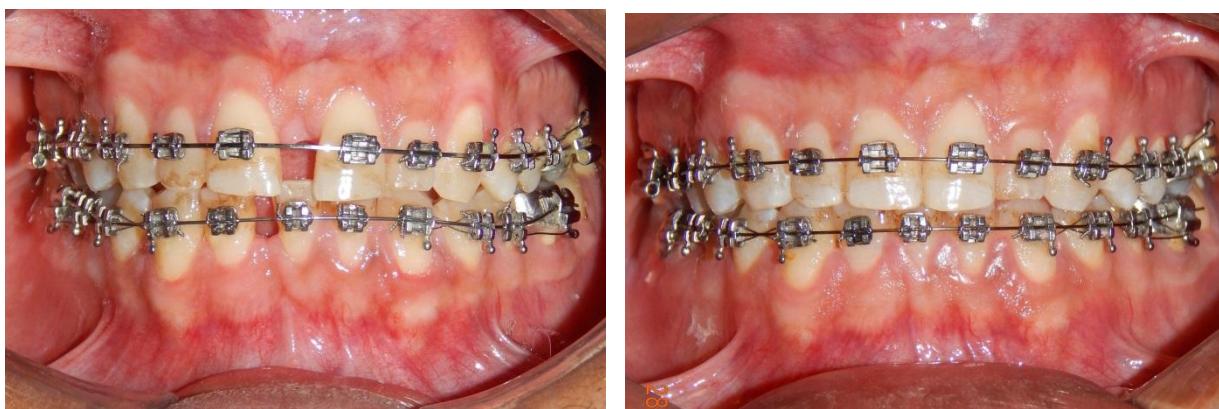


Fig. 3 Intraoperative photographs during treatment



Fig. 4 Posttreatment intraoral photographs

CASE REPORT

A 27-year-old man reported to the department of orthodontics in Peoples Dental Academy, Bhopal with a mesiodens present between the central incisors. Patients concern was only esthetic.

The molar relations were normal with centric occlusion and centric relations coincident. The mandibular dental arch was well aligned and dental midlines were coincident with facial midline.

The profile was straight with good vertical balance and lip competence. Cephalometric analysis showed all skeletal and dental values were within normal limits.

There was no pathologic finding with the mesiodens (premolar shaped) between the upper central incisors in the OPG. Only the left central incisor showing root dilaceration.

Intraoral tissues were normal and healthy. Bolton tooth-size analysis, anterior ratio showing mandibular

6 excess (4 mm) and overall ratio showing mandibular 12 excess (2.5 mm).

The treatment goals were to extraction of mesiodens and to maintain class I incisor, canine and molar relationship and to achieve normal overjet and normal overbite.

The treatment plan was extraction of mesiodens with lower single incisor extraction to achieve normal overjet and normal overbite.

DISCUSSION

Mesiodens can be classified on the basis of their occurrence in the permanent dentition (rudimentary mesiodentes) or primary dentition (supplementary mesiodentes) and according to the morphology as conical, trabeculated or molariform^{3,5,11}. Supplementary mesiodentes resemble natural teeth in both size and shape whereas rudimentary mesiodens exhibit normal shape and smaller size^{3,5}.

Tuberculate mesiodentes are barrel shaped with several tubercles or cusps and have incomplete or abnormal root formation. In contrast to conical mesiodens, tuberculate rarely erupt but rather delay the eruption of permanent incisors^{3,5,11}.

A third rare type is the molariform mesiodens which has a premolar like crown and an incompletely formed root^{3,5}.

CONCLUSION

The mesiodens is therefore a fairly common, though usually unpuberting but interesting dental anomaly that a dental practitioner chances upon. Delayed, ectopic or asymmetric eruption of the central incisors should

alert the clinician to the possibility of a mesiodens. Awareness of its incidence and behaviour is therefore significant.

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