Mesiodens in the Deciduous Dentition – A Case Report

Gupta Ambika\textsuperscript{a}, Gupta Charu\textsuperscript{b}, Singh Harneet\textsuperscript{b}, Dhariwal Richa\textsuperscript{c}

\textsuperscript{a} Assistant Professor
\textsuperscript{b} Demonstrator
Department of Oral Medicine and Radiology, Post Graduate Institute of Dental Sciences, Rohtak, Haryana, India
\textsuperscript{c} Dental Surgeon, Health Department, Mohindergarh, Haryana, India.

Abstract
Unicystic ameloblastoma is believed to be less aggressive than the solid or multicystic ameloblastomas. This report is a rare case of unicystic ameloblastoma of the maxilla that was treated by enucleation under suspicion of a dentigerous cyst related to impacted premolar. The neoplastic nature of the lesion became evident only when the enucleated material was available for histological examination. With this report, the authors illustrate the importance and complexity of differential diagnosis of lesions with a cystic aspect in the anterior region of the maxilla. Relevant diagnostic problems and choice of treatment of unicystic ameloblastoma are presented along with a review of the literature.

Keywords:
Ameloblastoma, Enucleation, Unicystic, Intraosseous, Multicystic

Gupta Ambika\textsuperscript{a}, Gupta Charu\textsuperscript{b}, Singh Harneet\textsuperscript{b}, Dhariwal Richa\textsuperscript{c}

\textsuperscript{a} Assistant Professor
\textsuperscript{b} Demonstrator
Department of Oral Medicine and Radiology, Post Graduate Institute of Dental Sciences, Rohtak, Haryana, India
\textsuperscript{c} Dental Surgeon, Health Department, Mohindergarh, Haryana, India.

Abstract
Unicystic ameloblastoma is believed to be less aggressive than the solid or multicystic ameloblastomas. This report is a rare case of unicystic ameloblastoma of the maxilla that was treated by enucleation under suspicion of a dentigerous cyst related to impacted premolar. The neoplastic nature of the lesion became evident only when the enucleated material was available for histological examination. With this report, the authors illustrate the importance and complexity of differential diagnosis of lesions with a cystic aspect in the anterior region of the maxilla. Relevant diagnostic problems and choice of treatment of unicystic ameloblastoma are presented along with a review of the literature.

Keywords:
Ameloblastoma, Enucleation, Unicystic, Intraosseous, Multicystic
**Introduction**

A supernumerary tooth is an additional entity to the normal series and is seen in all the quadrants of the jaw. [1] It may or may not be morphologically similar to the teeth of group to which it belongs i.e. molars, premolars or the anterior tooth. A supernumerary tooth may be present unilateral or bilateral, there may be a single tooth or multiple teeth, erupted or impacted and in one or both the jaws. The ratio of occurrence of supernumerary tooth in maxilla to mandible is 8:1 while the most common site in the maxilla is premaxillary region. [2] A supernumerary tooth present in the midline of the maxilla between the two central incisors is termed as ‘mesiodens’. [3] These teeth are usually small with a cone-shaped crown and a short root. [2] The incidence of mesiodens in permanent dentition ranges from 0.15-3.8% whereas in deciduous dentition ranges from 0-1.9%.

**Case report**

A six year old boy reported to the Department of Oral Medicine and Radiology of Government Dental College and Hospital, Rohtak with the chief complaint of mobile upper front tooth. There was pain associated with tooth number 61. The medical and family history was insignificant. On extraoral examination, no abnormality was detected. On intraoral examination, a full complement of primary dentition was seen in good oral health with mobile right upper central incisor. However, a conical ‘mesiodens’ was observed between the two primary central incisors placed slightly palatally in the midline. (Fig 1,2) Intraoral periapical radiograph showed the presence of permanent central incisors apical to the primary incisors and an erupted mesiodens with a conical crown and single short root. (Fig 3) The roots of primary incisors were resorbed which caused the mobility of right primary central incisor. The patient was referred to the Department of Pedodontics where 61 was extracted under local anesthesia along with the mesiodens. The patient is kept under observation for uneventful eruption of permanent incisors.

**Figure 1:** Intra oral view showing a conical shaped mesiodens between the two deciduous central incisors.

**Figure 2:** Intra oral view showing incisal aspect of the mesiodens and labially inclined 61.
Figure 3: Intraoral periapical radiograph of maxillary anterior region

Discussion

The etiology of supernumerary tooth is unknown and is not well understood. Several theories have been put forward which suggests a role of hyperactivity of dental lamina, dichotomy, atavistic tendency, and hereditary factors. [4-6] These teeth may also be a part of various disorders such as cleft lip and palate, cleidocranial dysplasia or Gardener’s syndrome. [7] While there may be a genetic influence, this does not follow a simple Mendelian pattern. [8] Supernumerary teeth occur with much less frequency in deciduous dentition. When such teeth are present, they often go undiagnosed due to similarity with their normal counterpart. [9] These teeth may also be mistaken for germination and fusion. [9] The frequency of eruption of primary supernumerary is much higher than the permanent supernumerary (73% vs 25%). This may be due to the presence of diastema in deciduous dentition. Almost 35-50% of the deciduous supernumerary teeth are followed by permanent supernumeraries in the same location. [6]

There is little evidence in the dental literature about the presence of mesiodens in the primary dentition. These conical shaped supernumerary teeth have certain characteristics like location in maxillary midline, palatal eruption, eruption during early childhood, may cause displacement of incisors or delay their eruption. [10] This case report presents a rare finding of mesiodens in the primary dentition.

The clinical significance of mesiodens lies in the fact, that these teeth may impede eruption of the central incisors (26-52%), cause displacement or rotation of permanent teeth (28-63%) or cyst formation (4-9%). [7,11,12] They may also be associated with crowding of the affected area, abnormal diastema or premature space closure, dilacerations of roots of developing permanent teeth or eruption into the nasal cavity. The abnormal eruption of mesiodens may cause occlusal disturbances. These teeth may also be an aesthetic problem for the child.

The best modality to evaluate mesiodens is a maxillary anterior occlusal radiograph. The management depends upon the position and the complications caused by such teeth. Extraction of erupted mesiodens is indicated if the tooth is causing displacement or resorption of adjacent teeth, causing occlusal interference or is associated with any pathology. In our case, the erupted mesiodens caused the rotation of crown of 51 and posed the risk for interference in the proper eruption of permanent central incisors. Therefore, the extraction of the mesiodens was planned. The appropriate time for surgical removal of mesiodens is at 5-6 years of age i.e. just prior...
to the eruption of permanent central incisors. Sometimes, the esthetic demands of the patient may also necessitate its removal.

**Conclusion:**

The occurrence of mesiodens in primary dentition is extremely rare. When these teeth are present, they may become a matter of concern for the parents as well as the clinician. Early diagnosis and prompt intervention are necessary to prevent any further complications.

**References**
