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Case Report

Mesiodens on A Talons Cusp- An Unusual Case

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Abstract: Mesiodens is a supernumerary tooth located between the upper maxillary central incisors. Talon cusp is a rare dental developmental anomaly seen on the facial or the lingual surface of anterior teeth, usually maxillary lateral incisors. This paper presents a rare clinical case of talon cusp in a supplemental type of mesiodens, which interfered with eruption of the permanent maxillary central incisor in a 12-year-old patient. Extraction of mesiodens here led to the eruption of the permanent right maxillary central incisor.Hence the earlier detection of of supernumerary teeth is necessary to avoid further complications.
Keywords: Talon cusp, Mesiodens, Supernumerary tooth.

INTRODUCTION

Supernumerary tooth is a developmental disturbance in which there is an increase in number of teeth in the primary or permanent dentition. Mesiodens is one of the most common types of supernumerary teeth seen in both the dentitions usually palatally placed between the maxillary central incisors. The aetiology of the occurrence of mesiodens is not clear though various theories have been postulated. The incidence of mesiodens in permanent dentition 1.5-3.8% and for primary dentition is 0-1.9% [1].

Talon cusp is an accessory cusp-like structure seen on the lingual or the facial surface of maxillary or mandibular incisors. It extends half the distance from cement-enamel junction to the incisal edge and contains enamel, dentine and pulp tissue [2]. Its occurrence in mesiodens is extremely rare with only 6 cases being reported till date in PubMed literature [3].

The present case report is of a 12-year old girl who had a talon cusp associated with mesiodens.

CASE REPORT

A 12 year old Indian girl reported to the Department of Pedodontics and Preventive Dentistry, A.B.Shetty Memorial Institute of Dental Sciences, Mangalore, Karnataka, India with a complaint of missing upper right front tooth. Intraoral examination revealed no abnormalities except for the missing right permanent maxillary central incisor with the other teeth showing normal eruption pattern. Radiographic evaluation with an Intraoral Periapical Radiograph and Occlusal radiograph was carried out to confirm the status of the unerupted permanent right maxillary central incisor which revealed presence of a mesiodens between the erupted left permanent maxillary central incisor and the un-erupted right permanent maxillary central incisor preventing the eruption of the right permanent maxillary central incisor. The mesiodens exhibited a projection on the palatal aspect and also showed incomplete root formation. A treatment plan included surgical extraction of the mesiodens under local anaesthesia. After placing the incision, flap was reflected and bone was cut to allow access for removal of the mesiodens. Removal of mesiodens was done ensuring minimum trauma to the un-erupted right permanent maxillary central incisor. Clinically the presence of Talon cusp was observed on the mesiodens which was sent for histopathological examination. The ground section revealed normal appearing enamel and dentine. The talon cusp was true talon type. The patient was recalled after two weeks during which the incisal edge of the right permanent maxillary central incisor

was appreciated suggesting the eruption of the tooth. The patient was recalled after 3 months where the permanent right central incisor had fully erupted into occlusion.

DISCUSSION

Mesiodens accounts for 80% of all the supernumerary teeth. The etiology of it is not clear though a number of theories have been postulated. The theories are (a) the dichotomy of the tooth bud, (b) hyperactivity of the dental lamina, (c) role of genetic and environmental factors [4].

Mesiodens can be classified in 2 ways: (a) Based on their occurrence as supplemental or rudimentary, (b) based on the morphology as supplemental, conical, tuberculate or molariform. The male is to female ratio is 2:1 [5].

A mesiodens may erupt normally, stay impacted and assume abnormal positions. Impacted mesiodens are usually asymptomatic and discovered on routine radiological examination of the premaxillary area. A mesiodens can cause a variety of complications like impaction, delayed eruption or ectopic eruption of the adjacent tooth, root resorption of adjacent tooth and formation of odontogenic cysts and tumors (Example: dentigerous cyst, adenomatoid odontogenic tumor) [1].

Talon cusp can be described as an uncommon dental anomaly manifesting as an accessory cusp-like structure, projecting from the lingual or facial surface of anterior teeth of either dentition. It was first described by WH Mitchell in 1892 and was termed 'Talon cusp' by Mellor and Ripa in 1970. The etiopathogenesis is multifactorial involving genetic and environmental factors. Radiographically it appears superimposed on the tooth it is present. Histologically it contains enamel, dentine and with or without pulp tissue. Hattab et al have classified it based on the degree of formation and extension into true talon, semi-talon and trace talon. It has a predilection for permanent dentition and maxilla compared to mandible. It occurs more in males. It can lead to complications like compromised esthetics, occlusal interferences, periodontal problems, risk of caries and advanced attrition leading to pulp exposure. It has been reported to occur in association with Sturge-Weber syndrome, Mohr syndrome and Rubinstein-Taybi syndrome although the present case did not show any associated syndrome. It can also occur with other dental anomalies like bifid cingulum, tubercular-like cingulum and accentuated marginal ridges. The management of talon cusp varies with the circumstances of each case, and should be as conservative as possible [2]. However the location of talon cusp was on impacted mesiodens so the best treatment option was surgical extraction.

Presence of talon cusp is common. What makes it interesting in the present case is the mesiodens interfering with the eruption of right permanent maxillary central incisor and other is the presence of talon cusp within it.

Fig. 1: Pre-operative image

Fig. 2: Post-operative image (After 3 months)

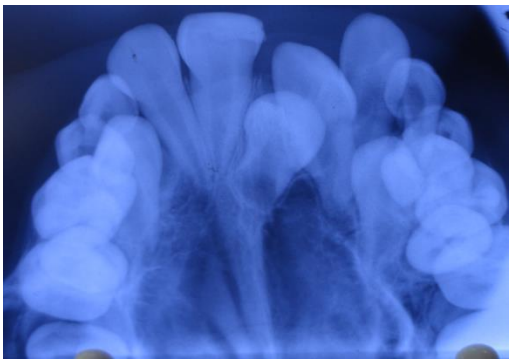

Fig. 3: Occlusal radiograph (pre operative)

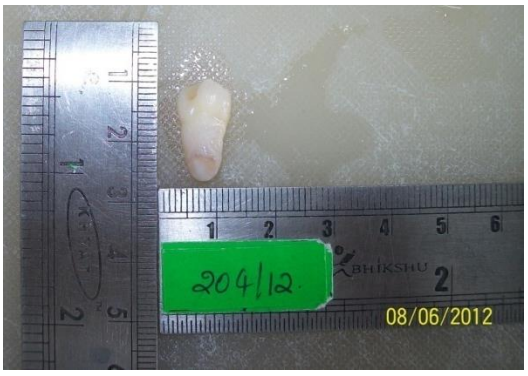

Fig. 4: Extracted mesiodens which had the talons cusp

CONCLUSION

Role of Intraoral periapical radiograph is important to ascertain the status of unerupted teeth in children during the mixed dentition period especially in cases of abnormal eruption sequelae caused by the presence of mesiodens. Mesiodens is one of the most common cause for preventing the eruption of the maxillary central incisors and is also associated with other complications such as ectopic eruption of adjacent teeth, delayed eruption of teeth and root resorption of adjacent teeth. Thus the role of the pedodontist in management of a case of mesiodens is important because earlier the detection, the minimal are the future complications and better the prognosis.

In the present case extraction of mesiodens led to the eruption of the permanent right maxillary central incisor.

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