

Evaginated odontome on maxillary lateral incisor—a reverse and a rare presentation

Maksiller lateral kesici üstüne invajine olmuş odontom- ters ve nadir bir presentasyon

Renita Lorina Castelino¹, Anusha Rangare Laxmana², Preethi Balan³, Fazil KA³, Sham Kannepady⁴

¹A B Shetty Memorial Institute of Dental Sciences Nitte University, India

²Century International Institute of Dental Sciences and Research Centre, India

³Sree Anjaneya Institute of Dental Sciences, Kerala University of Health Sciences, Calicut, India

⁴School of dentistry, International Medical University, Kuala Lumpur, Malaysia

Abstract

Evaginated odontome or talon cusp is an uncommon dental anomaly with accessory cusp-like projection arising from the cingulum area of the maxillary or mandibular anterior teeth. This anomalous cusp resembles an eagle's talon and hence the name. It occurs in both the primary and the permanent dentition. The presence of talon cusp on the lingual surfaces of primary permanent teeth is considered to be pathognomic, but the case reported here is an unusual case which is present in the facial aspect in a female patient. As per the existing literature only seven case reports of facial talon in permanent maxillary teeth have been reported.

Keywords: Talon, facial, eagle, evaginated

Özet

İnvajine odontome veya talon tüberkülü, maksillar veya mandibular ön dişlerin singulum bölgesinden uzanan tüberkül benzeri aksesuar bir çıkıntı ile birlikte bulunan nadir bir dental anomalidir. Bu anormal tüberkül bir kartal pençesine benzediği için bu ismi almıştır. Bu anomali hem sütte hem de daimi dişleri çıkarma döneminde ortaya çıkar. Primer daimi dişlerin lingual yüzeylerinde talon tüberkülünün varlığı patognomik olarak kabul edilir, fakat burada bildirilen vaka alışılmadık bir vakadır, bir kadın hastada fasiyal tarafta bulunmaktadır. Mevcut literatür uyarınca, sadece yedi vakada kalıcı maksiller dişlerde olan fasiyal talon tüberkülü bildirilmiştir.

Anahtar kelimeler: Talon, fasiyal, kartal, invajine

Introduction

Tooth development is a complex process and is divided into 6 morphologic stages and 5 physiologic processes. Any disturbance in these stages/processes can result in altered shape and size of teeth. The disturbances during morpho-differentiation can result in anomalies/accessory cusps like talon cusps or evaginated odontome, cusp of carabelli and peg laterals (1). Talon cusp is an anomalous cusp like structure composed of normal enamel and dentin, and containing varying extension of pulpal tissue and is named so, because its shape resembles an eagle's talon (2). It was described by W H Mitchell in 1892 and was named as talon cusp by Mellor and Ripa in 1970 because of its resemblance to eagle's talon (3). The frequency of talon cusp is 0.04 - 10% and the permanent dentition has been involved 3 times more often than the primary dentition (4). The incidence is found to be more in males than females. The talon cusp is usually seen on the palatal or lingual surfaces of the maxillary or mandibular anterior teeth, and

very few cases have been reported about its presence on the facial aspect of tooth surface (5). The cusps predominantly occur on permanent maxillary lateral or central incisors and less frequently on mandibular incisors and maxillary canine (6). The case reported here highlights the rare presentation of talon cusp on the facial aspect of maxillary lateral incisor in a female patient.

Case

A 15 year old female patient reported to the department of oral medicine and radiology with the complaint of irregularly placed teeth in the upper left tooth region since eruption. The patient's medical, drug and family history were non-contributory. On external oral examination patient had no gross facial asymmetry and had a straight profile with competent lips. On intra-oral examination, the maxillary right lateral incisor showed an elevation which was broader in its cervical region and tapered on incisor top edge resembling talon cusp, the cervical area had slight brownish discoloration and enamel hypoplasia was noted on the incisor edge (Figure 1).

Correspondence: Renita Lorina Castelino, A B Shetty Memorial Institute of Dental Sciences Nitte University, Mangalore Karnataka, India.
Tel:+ 91 9880143370 renita.castelino@yahoo.com

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The palatal aspect of the tooth did not show any abnormalities. Decayed teeth were present in relation to 16, 26, 36 and 46 and Angles class I molar relation was noted on both right and left side. Electric pulp testing was performed on the maxillary lateral incisor and no abnormalities were noted.

Based on the findings a provisional diagnosis of angles class I malocclusion with crowding in relation to 22 and 23 was made.



Figure 1. Clinical picture showing elevated area on the crown of the right lateral incisor extending from the cervical area and tapering towards the incisal margin



Figure 2. Intraoral periapical radiograph showing V-shaped radiopaque area overlapping the crown of right maxillary lateral incisor with superimposed retained deciduous root tip

An intra-oral radiograph of maxillary lateral incisor was performed which revealed a thick V shaped radiopacity on the coronal aspect of the tooth. The density of the V shaped structure was comparable to the density of the enamel. There were no pulpal and periapical changes noted in the intra-oral film. Based

on these clinical and radiographic findings a diagnosis of facial evaginated odontome / Stage 1 talon cusp (Figure 2) according to Mayes AT et al (7) was made. A well-defined radiopacity was also noted overlying the cervical 1/3rd of the tooth suggestive of retained deciduous root tip.

The patient was advised extraction of the retained root tip, oral prophylaxis, restoration of decayed teeth and orthodontic correction for malocclusion. There were no abnormalities present on the maxillary lateral incisor with talon cusp and was asymptomatic and hence the patient was advised regular checkups.

Discussion

A talon cusp is an additional cusp located on the surface of an anterior tooth and extends at least half the distance from the cemento-enamel junction (CEJ) to the incisor edge(3). The other terms used to describe this anomaly includes dens evaginatus, supernumary cusp, horn, hyperplastic cingulum, evaginated odontome cusped cingulum, accessory cusp and supernumary lingual tubercle (8). The accessory cusp has been seen in association with other dental anomalies like supernumerary teeth, odontomas, impacted teeth, peg shaped lateral incisors, dens invaginatus. Talon cusps have been seen in patients with Mohr, Rubinstein Tyabi, Sturge – Weber syndrome and Ellis van Creveld syndrome (9). Talon cusp is mostly seen in the permanent dentition than in the primary dentition. Maxillary teeth are seen to be more affected than the mandibular teeth (6) as seen in the case presented here. According to a study conducted by Prabhu et al the prevalence of talon cusp was seen more in males (75%) than females (25%) in a ratio of 3:1 which is in accordance with the published data available in the literature (10) and similar finding was present in the case presented here. The clinical problems associated with the presence of talon cusps are stagnation of the food, caries, periapical lesions, irritation of tongue during speech and mastication, other soft tissue irritation, compromised esthetics, occlusion interference which may lead to accidental cusp fracture, displacement of the affected tooth, temporomandibular joint pain and periodontal problems because of excessive occlusion force (6) Management usually depends on individual presentation and complications. Aesthetics can be a major concern if talon cusp occurs on the labial aspect. As there was no risk of pulpal exposure, caries formation or esthetic concern in the case reported here, periodic review was considered.

As per the existing literature only seven case reports of facial talon in permanent maxillary teeth have been found till date and nine cases of facio-lingual talon cusps have been reported. Few archeological studies have reported of labial talon cusp in ancient skeletal remains (10).

Mayes in 2007 categorized facial talon cusps into three stages, starting from the slightest to most extreme forms as follows:

Stage 1: The slightest form, consisting of slightly raised triangle on the labial surface of an incisor extending the length of the crown, but not reaching the cementoenamel junction or the incisor edge;

Stage 2: The moderate form, consisting of a raised triangle on the labial surface of an incisor that extends the length of the crown, and does not reach the cementoenamel junction, but does reach the incisor edge, and can be observed clearly and palpated easily at this stage; and

Stage 3: The most extreme form, consisting of a free-form cusp, extending from the cementoenamel junction to the incisor edge on the labial surface of an incisor. Talon cusp is an uncommon odontogenic anomaly (7).

Conclusion:

The aim of this case report was to highlight the rare developmental anomaly of facial talons cusp in a female patient as very few cases have been reported in literature. The paper also emphasizes the need for identification of rare developmental anomalies of teeth by oral physicians to prevent any complications associated with them.

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