Talon cusp is a rare dental developmental anomaly seen on the lingual surface of anterior teeth. It may cause clinical problem like occlusal interference, irritation of tongue during speech and mastication, carious lesion in the developmental grooves, attrition of the opposing tooth and periodontal problem due to excessive occlusal forces. This paper presents a case of talon cusp present on the lingual surface of left maxillary lateral incisor.

Keywords: Talon cusp, dental, developmental

Introduction

Talon cusp is rare dental developmental anomaly characterized by an accessory cusp like structure which projects from the cingulum or cementoenamel junction of maxillary or mandibular anterior teeth and can be found in both primary as well as permanent dentition. This anomalous structure is composed of normal enamel and dentine with a varying degree of pulp tissue\(^1,2\). It affects both sexes either unilaterally or bilaterally. Its prevalence has been reported to be 0.06% to 7.7%. The secondary dentition is more commonly affected than primary dentition, the maxillary lateral incisors being the most frequently involved teeth followed by central incisor (24%) and canines (9%)\(^3\). The accessory cusp is named as talon cusp because of its resemblance in shape to an eagle’s talon. The etiology of talon cusp remains unknown. It has been suggested that it may have various etiological factors like genetic and environmental and during morpho-differentiation stage of tooth development\(^4\). In the presented case report, the talon cusp was incidentally found on the lingual surface of maxillary lateral incisor which was otherwise asymptomatic.
Case Report

A 19 years old female patient came to the department of oral & maxillofacial surgery, Bhojia Dental College & Hospital, Budh, Baddi with chief complaint of pain in the right lower posterior region of the jaw. The medical and family history of the patient was non contributory. There was no reported history of any orofacial trauma. Extra orally examination revealed no abnormalities. On intra oral examination right mandibular third molar was seen to be partially erupted with pericoronitis of the overlying flap. Rest of the dentition and periodontium was normal. Further, an enamel projection in relation to the maxillary lateral incisor extending from its cingulum up to the incisal edge was also found by chance (Fig.1, 2). This projection was pyramidal in shape and measured 6 mm inciso-cervically and 4 mm mesio-distally. The tooth was apparently health on clinical examination with no signs of dental caries, non tender to percussion and responded normally to electrical pulp testing. There was no occlusal interference and this additional cusp like projection did not irritate the tongue during speech or mastication. Both periapical (Fig. 3) and occlusal (Fig. 4) radiograph of this tooth showed V-shaped and inverted v shaped radiopaque superimposition on the image of the affected crown, respectively. For the management of pericoronitis in relation to right lower 3rd molar, the patient was put on regular antibiotics & NSAIDs and advised warm saline mouth rinses. As this 3rd molar tooth was vertically aligned with sufficient space for its eruption, a wait and watch policy was adopted for the erupting 3rd molar. As the taloned tooth did not pose any significant clinical problems and was asymptomatic, corrective treatment was not instituted for this tooth. The patient was made aware of its presence and further educated towards the maintenance of adequate oral hygiene.

Discussion

Talon cusp is a relatively rare odontogenic anomaly with multifactorial etiology including both genetic and environmental factors. Many theories were put forward but most accepted one suggests that talon cusp might occur as a result of an outward folding of inner enamel epithelial cells and a transient focal hyperplasia of mesenchymal dental papilla. In particular, large talon cusps may cause occlusal interference, irritation of the tongue during speech and mastication, displacement of the affected
tooth, carious lesion in the developmental grooves delineating the cusp, pulpal necrosis, periapical pathosis, attrition of the opposing tooth, and periodontal problems due to excessive occlusal forces. In the reported case, there was no such occlusal trauma and tooth was asymptomatic. Hence no treatment was required except for maintenance and regular follow up. It is estimated that the frequency of talon cusp might range from one to eight percent of the population. Hattab et al – reported a male to female ratio of 47:26 in 73 patients. Most reported cases of talon cusp are located in the permanent maxillary anterior dentition. Although talon cusp usually occurs as an isolated entity, its incidence has reportedly increased in teeth related to cleft palate syndromes and in association with other anomalies. The case reported here was not associated with any known abnormal systemic developmental syndrome.

The treatment of talon cusp depends upon the shape, location and size of the accessory cusp and also whether the cusp contains or is devoid of a pulp horn. Thus periodic and selective reduction of the cusp, with application of desensitizing agent, reduction of cusp with or without endodontic therapy, sealant application on the grooves and esthetic restorations are options of treatment. Gungor et al reported a case of bilateral talon cusp on primary maxillary central incisors whose histological evaluation revealed the existence of pulpal tissue in the cusps. Because of superimposition of cusp over the affected tooth, a radiographic view is difficult in assessing the pulpal configuration inside the talon cusp. The tooth reported here did not pose any significant clinical problems, so no treatment for the tooth was planned. This is in accordance with Mador who proposed that if function was within normal limits, aesthetic appearance was satisfactory and caries or advanced attrition were absent, treatment of the talon cusp was not required.
Fig. 1 Intraoral view showing Talon cusp on Left Maxillary Lateral incisor.

Fig. 2 Stone cast showing Talon cusp on Left Maxillary Lateral incisor.

Fig. 3 Intra-oral periapical radiograph showing V shaped radiopacity of affected tooth.

Fig. 4 Occlusal view showing inverted V shaped radioopacity of affected tooth.
References


