



Facial Talon Cusp on Permanent Maxillary Canine: A Rarity, Report of the Case

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Abstract

Talon cusp is a rare developmental anomaly presenting as extra cusp mainly on palatal and lingual surface of the anterior teeth and can be seen mainly in maxillary lateral incisor and maxillary central incisor. It is rarely seen on the facial surfaces and very few cases have been reported. Facial talon cusps causes both aesthetic and functional problem. A rare case of talon cusp on the facial aspect of maxillary canine is reported.

Keywords: Maxillary canine; Facial talon cusp

Introduction

The talon cusp is a relatively rare developmental morphological anomaly of tooth, characterized by an additional cusp-like projection, arising on the labial/palatal/lingual teeth [1]. The reported prevalence in permanent dentition is 0.6% in Mexicans, 7.7% in a northern Indian, 2.5% in a Hungarian, 5.2% in Malaysian, and 2.4% in Jordanian population [2]. It has predilection for the maxillary over the mandibular teeth, and males are found to be more commonly affected than females. Mayes in 2007 categorized facial talon cusps on incisors into three stages, starting from the slightest to most extreme forms as follows (which teeth class):

- 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 cemento-enamel junction or the incisal 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, does not reach the cemento-enamel junction, but does reach the incisal edge, and can be observed clearly and palpated easily at this stage;
- Stage 3: The most extreme form, consisting of a freeform cusp, extending from the cemento-enamel junction to the incisal edge on the labial surface of an incisor [3].

Classification scheme for variable buccal bulge morphology of deciduous first molars:

- Type A: Bulge in smooth continuity with the buccal surface.
- Type B: Prominent bulge in the cervical third separated from the buccal surface by a well-demarcated groove.
- Type BO: Prominent bulge almost reaching the occlusal table separated from the buccal surface by a well-demarcated groove.
- Type C: Distinct cusp-like structure in the cervical third on the buccal surface.
- Type CO: Distinct cusp-like structure almost reaching the occlusal table on the buccal surface [4].

Talon cusp usually occurs on the lingual surfaces of teeth. The maxillary lateral incisors are most often affected (67%), followed by the central incisors in 24%, and canines in 9% [5]. Abbott [6], Chinni et al. [7], and Thakur et al. [8] reported cases of permanent canines with facial talon cusps. The purpose of this article is to document a case of labial talon cusp on the permanent maxillary canine as a very rare dental anomaly.

Case Presentation

A 11-year-old male patient presented to Department of Pediatric and Preventive Dentistry with chief complaint of labially placed canine. Clinical examination revealed a well-defined unilateral

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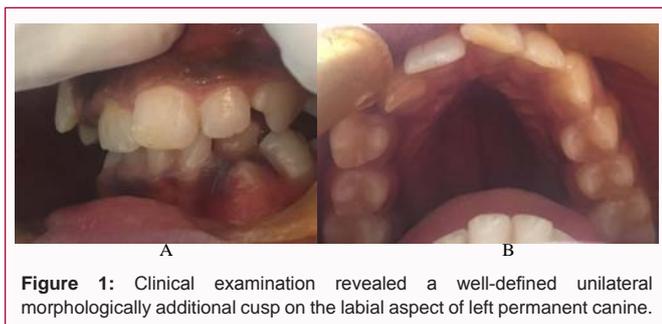


Figure 1: Clinical examination revealed a well-defined unilateral morphologically additional cusp on the labial aspect of left permanent canine.

morphologically additional cusp on the labial aspect of left permanent canine (Figure 1). The accessory cusp was raised triangular in shape and extended from the gingival margin to the incisal edge. It was located on the mesial aspect and completely attached to it. No other abnormality was associated with the affected tooth. All other teeth did not show any developmental abnormalities. The patient's medical and family history was unremarkable. The parents had no knowledge of similar anomalies in either of the dentitions of any other family members. Intraoral and extraoral examinations of the patient did not reveal any abnormalities of soft and hard tissues.

Discussion

Facial Talon cusp is an uncommon developmental anomaly (usually lingual) affecting the morphology of anterior tooth. The exact etiology is not known. It is thought to arise during the morphodifferentiation stage of tooth development, as a result of outfolding of the enamel organ or hyperproductivity of the dental lamina [9]. It is also found in close family members suggesting strong genetic influence but may be found in isolation also. Talon cusp appears to be more prevalent in patients with Sturge-Weber syndrome, Rubinstein-Taybi syndrome and Mohr syndrome [10]. The case reported here was not associated with any syndromes, and did not show any other dental anomalies or history of similar tooth in the family members.

Talon cusp usually occurs on the palatal or lingual surfaces of the anterior teeth with very few cases reported on the facial tooth surfaces. There are only 21 clinical cases reported in the literature, out of which there is only two reported case of facial talon cusp on the permanent maxillary canine by McNamara et al. [11] and Thakur et al. [8]. Therefore, the case described in the present study represents a very rare form of labial talon cusp on permanent maxillary canine. Management of talon cusp is variable. No treatment is usually required for small asymptomatic ones except for periodic checkup. However larger ones which interfere with functions and which may cause complications require early diagnosis and treatment to prevent clinical problems. Problems which can be seen with talon cusp includes interference with occlusion or bite, irritation of soft

tissues, accidental cusp fracture, susceptible to dental caries, esthetic problems, difficulty in bracket bonding in orthodontic treatment. In the literature, different treatment modalities have been advocated to manage talon cusps. It has been reported that the presence of a talon cusp is not an indication for dental treatment unless it causes clinical problems. Furthermore, early diagnosis avoids future complications. Depending on the size and configuration of the talon cusp, the treatment should be planned individually after clinical evaluation. The presence or absence of pulp tissue in the talon cusp can be indicative of different treatment alternatives. These alternatives include a periodic grinding procedure with a desensitizing agent such as fluoride varnish or a single-visit reduction of the cusp with or without endodontic therapy.

Conclusion

A correct and early diagnosis of talon cusp especially during the patient's formative years is important to plan for treatment if required to prevent further complications.

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