

# Tooth Impaction and Hypodontia in a Patient with Talon Cusp: Report of a Case

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**Objectives** This study is aimed to introduce an unusual case of a female with two talon teeth on both maxillary lateral incisors.

**Case** A 38-year-old female was referred to oral medicine department, Qom university of medical sciences for routine examinations. Bilateral maxillary talon cusp was observed on maxillary lateral incisors. Future evaluation revealed impaction of maxillary left canine and missing all wisdom teeth. Since talon teeth were not decayed and no occlusal interferences were present, no treatment was performed and patient was scheduled for routine follow up recalls.

**Conclusion** Comprehensive examination of the case revealed the presence of bilateral talon cusp teeth in maxilla.

**Keywords** Tooth, Supernumerary, Anomaly

## Introduction

Talon cusp is an uncommon developmental anomaly with the prevalence of less than 1% to approximately 8% of the population. It is characterized by accessory cusp like projections which can occur bilaterally or unilaterally both in anterior and posterior teeth<sup>1-3</sup>. Mitchell presented the first case of talon cusp in 1892<sup>4</sup>. It is observed more frequently in permanent dentition<sup>5</sup>. The involvement of maxillary teeth is more common with maxillary lateral incisors being the most commonly affected teeth<sup>1</sup>.

Although this anomaly is relatively rare but in some cases it has clinical significance. When anterior teeth are affected, the extension of projection may reach to incisal edge, causing occlusal interference<sup>1</sup>, Gingivitis, apical periodontitis, tooth attrition and even higher rate of carious lesion<sup>1, 5, 6, 7</sup>. It is believed that there is a higher frequency in male than female individuals and unilateral involvement is more common<sup>8, 3</sup>. Dense evaginatus, tuberculated premolar and supernumerary cusp are synonyms for talon cusp<sup>9</sup>. Although the etiology is not well understood, both of the genetic and environmental factors have been suggested<sup>10</sup>.

The aim of this article was to report an unusual case of talon teeth on the right and left maxillary lateral incisors in a female patient. Bilateral involvement (with no occlusal interferences) as well as missing of all third molars and left canine impaction also were detected in this case.

## Case

A 38-year-old female was referred to the department of Oral Medicine at Qom University of Medical Sciences for routine dental checkup. Medical and familial histories were normal. She had multiple decayed teeth and poor oral hygiene. Intraoral examination revealed cusp like projections on palatal surfaces of both lateral maxillary incisors (figure 1) despite stain accumulation on palatal

surface, no dental caries was detected in teeth with talon cusps. These projected cusps did not cause any occlusal interference and were asymptomatic.

Additionally right maxillary canine was labial displaced while the left one was not present. For further evaluation of the impacted canine and position of other wisdom teeth, a panoramic and relative periapical radiographs (of maxillary lateral incisors) were obtained.



Figure 1- Bilateral talon cusp of maxillary lateral incisors

The panoramic view revealed impacted canine but all third molars were not present and presumed, missed as no report on extraction existed (figure 2).



Figure 2- Panoramic view shows missing of all third molars and impacted left maxillary canine

Periapical radiographs of lateral incisors showed a marked opacity superimposing the normal crown contrast due to dense evaginatus (figure 3). According to the clinical presentation a diagnosis of bilateral talon cusp was made as

well as canine impaction and missing t<sup>3rd</sup> molars. Patient was advised to have frequent recalls in order to prevent potential new cavities.



**Figure 3-** Periapical radiographs of lateral incisors shows opacity superimposed on the crown due to dense evaginatus

## Discussion

Talon cusp is an accessory cusp like structure commonly on palatal/lingual surfaces of incisor teeth. Hattab et al<sup>11</sup> classified talon based on the degree of cusp extension from cemento enamel junction (CEJ) to incisal edge in order to determine the type of the talon cusp. These are as follows:

Type 1 (true talon): additional cusp extends half way from CEJ to incisal edge

Type 2 (semi talon): additional cusp extends less than half way from CEJ to incisal edge

Type 3 (trace talon): an enlarged cingulum

It is evident that talon cusp is more common in men than in women and unilateral involvement is more observed and reported<sup>8, 3</sup>. In the current case the talon cusps were observed bilaterally on the right and left maxillary lateral incisors of this female patient. Based on the classification of Hattab, both were types 1 with a marked extension of the cusp to the incisal edge in right lateral incisor producing a T-form crown contour in occlusal view<sup>3</sup>.

Dense evaginatus is a rare anomaly, but in certain instances it may require more attention. This accessory cusp may result in occlusal interferences specially when it is large. Susceptibility to caries need also to be addressed due to deep grooves, opposing tooth attrition and aesthetic problems<sup>7</sup>. In these situations periodic grinding to eliminate occlusal interferences, fissure sealant to seal the grooves prophylactically and endodontic treatment in case of pulp exposure may be required<sup>11</sup>.

This current case did not present any significant complaint and infact she was not aware of such anomaly on her teeth. Based on the linical normality of teeth relationships, treatment was planned or conducted and only she was advised to return for control every 6 month. Mador suggested that if aesthetic appearance of talon cases is satisfactory, function is normal and caries or attrition was also absent, no treatment would ne implemented<sup>12</sup>. But in some cases occlusal interferences are occurred occlusal correction<sup>13</sup> and even endodontic treatment are indicated in absence of caries<sup>14</sup>.

The association of talon cusp with other anomalies such as peg shaped lateral incisors; unerupted canine, mesiodense, odontoma and hypodontia have been reported before<sup>3</sup>. Dash reported a case of talon cusp with mandibular second premolar impaction and hypodontia while the current case was presented with impaction of canine and missing 3<sup>rd</sup> molars.<sup>3</sup>.

## Conclusion

Comprehensive examination for detection of taloned teeth in order to prevention of caries or perform prophylactic treatment is recommended.

## Conflict of Interests

None Declared ■

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