

Presentation and Management of Talon Cusp

Pages with reference to book, From 314 To 315

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Introduction

Talon cusp is a rare dental anomaly that manifests as an accessory cusp like structure in a tooth crown¹. The shape of the cusp in this anomaly resembles an eagle's talon and hence has been given this name². The cusp involves the lingual cingulum area of the permanent anterior teeth³. It is composed of enamel, dentine and occasionally has a horn of pulp tissue⁴. The cusp blends smoothly with the tooth, however, there is a developmental groove in the area where the cusp joins the lingual surface of the tooth. This area is susceptible to caries and is the main cause of occlusal interference leading to malocclusion⁵.

Recently there have been reports that structural anomalies like talon cusp have been observed in primary teeth^{2,6-9}. Mellor and Ripa¹⁰ have emphasized the functional and aesthetic problems that this uncommon condition can pose. It is recommended that this condition should be treated prophylactically. Endodontics is necessary in most cases that undergo occlusal accommodation. Various authors have suggested different methods of treatment^{11,12}. The main etiological factors leading to this type of disorders are craniofacial syndromes. It can also be induced by trauma or other localized insults to the tooth germ¹³.

Case Report

A 9 year old boy, presented to the out-patient dental clinic of the hospital. He had no major complaints and was not in pain, though according to his family members, the appearance of one of his teeth was compromised.

On examination his upper left central incisor was giving a typical picture of a tooth with talon cusp. All the other teeth were of normal shape, size and structure. The patient had an overjet and as such this tooth was not occluding with the opposing arch. It was thus not interfering with the patient's normal dental functions, though occasionally it hindered the movements of the tongue. The tooth had erupted about 2 years back and since its eruption it had been in this state.

Periapical and occlusal radiographs were taken that showed a peculiar picture of the upper left central. It also gave us the picture of the other teeth present. c, d and e were still present in all quadrants. After viewing the radiographs and examining the patient clinically, it was decided that initially occlusal and palatal adjustments would be done followed by pulpotomy. Pulpotomy was decided because the apex of the tooth was still very wide and had not fused. This method would facilitate the normal development of the tooth. As there was a horn of pulp tissue visible on the radiograph, 1 cartridge of lignocaine with 1: 100,000 adrenaline as local anaesthetic was used, half on the labial and half on the palatal sides.

Palatal and occlusal adjustments were made accordingly. Pulpotomy was done by initially placing a formocresol dressing for 24 hours and later bonding the defect with calcium hydroxide. The patient was asymptomatic and has been completely pain free since the procedure was carried out (more than 6 months ago). It was suggested that the patient should undergo orthodontic treatment and the final aesthetic restorations should be done accordingly. At this stage the contours of the tooth were rectified and the aesthetic defect was built up with light cured composite.

Discussion

Talon cusp is a rare structural anomaly that involves the incisors⁴. Reported literature suggests that in most cases this uncommon condition occurs in upper central incisors² and in some cases the upper laterals⁵ are involved. In a survey done in Mexico to determine dental anomalies in children, this condition was present in only 0.06% (0.6 in 1000)¹⁴. In a smaller survey done on 536 patients presenting to the pediatric department of dental school in Malaysia, 5.2% children had talon cusp in one of their incisors⁵. This figure is surprisingly low. Literature suggests that this disorder occurs in both males and females equally though most studies show a male preponderance.

Clinical problems associated with this defect relate to a compromised appearance of the tooth, occlusal interference, tooth displacement, caries and tongue irritation¹. It is also reported that this condition can cause malocclusion and shift in the normal midline of the patient's dentition¹⁵.

In our patient the main problem was the appearance and the esthetics. He had a gross overjet due to which the lower teeth were not affected, however, the tongue was continuously being irritated due to this protruding structure. There are a number of methods that have been suggested to solve the plight of patients suffering from this type of anomaly. It is recommended that if occlusal accommodation is done, endodontics is necessary as this cusp normally has an extra pulp horn⁴. The traditional methods of treatment have been reported by various authors^{1,8,12,15}. Most have, however, recommended pulpectomy. Pulpotomy with calcium hydroxide has been reported by a few¹² whereas some clinicians have simply ground off the protruding cusp and left the tooth in this state as they failed to find any extension of pulpal tissue in it¹⁶.

Some authors have also reported cases of bilateral gemination for central incisors with talon cusp. To them proper restoration of the tooth was not possible and hence extraction of the geminated centrals and their replacement with a large lateral incisor gives a better occlusion and more esthetics¹⁷.

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