

FACIAL TALON CUSP ON MAXILLARY LATERAL INCISOR : A CASE REPORT.

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ABSTRACT: Talon cusp is a supernumerary structure, developmental disturbance in the shape of teeth. Projecting from the cement enamel junction to the variable distance towards incisal edge of the tooth. Commonly occurring on Palatal/Lingual aspects of primary and permanent incisor teeth. Presence of the same on facial aspect of the incisor as an isolated anomaly is rare. This report presents one such case of presence of talon cusp on the facial aspect of a maxillary lateral incisor.

KEYWORDS: Facial Talon, Labial Talon, Talon Cusp.

INTRODUCTION

Talon cusp is a morphologically well delineated accessory cusp like anomalous structure. It has been defined as super neumarary accessory talon-shaped cusp projecting from the lingual or facial surface of the of a tooth crown extending at least half the distance from cement enamel junction to the incisal edge of maxillary or mandibular anterior teeth in both primary and permanent dentition. Also referred to as prominent accessory cusp – like structure, exaggerated cingula, additional cusp, cusp like hyperplasia, accessory cusp and superneumarary cusp. Composed of normal enamel, dentine and varying amounts of pulp tissue.^{1,2}

Back ground

First described by W.H Mitchell in 1892 as “a process of horn like shape curving from the base downward to the cutting edge” in an upper central incisor of a woman^{1,2}. Mellor and Ripa named the accessory cusp as “talon’s cusp “because it resembles an eagles talon in shape^{1,2}.

The exact etiology is not known but it is suggested to be a combination of genetic and environmental factors^{3,4,5}. It is thought to arise during the morpho differentiation stage of tooth development as a result of out folding of the dental lamina [3, 6]. Suggestions of strong genetic influence in its formation as evidenced by its occurrence in close family members.^{5, 7, 8}

Talons cusp may occur in isolation or with other dental anomalies such as mesiodens[9], odontome, unerupted impacted teeth^{10,11}, peg shaped maxillary incisor, dens invaginatus¹¹, cleft lip¹², and distorted nasal alae, bilateral germination⁸, fusion^{14,15}, supernumerary teeth and enamel clefs^{16,17}. Also, associated with systemic conditions such as Mohr syndrome¹⁸, Sturge Weber syndrome¹⁹, Rubenstein-Taybi syndrome¹⁹, incontinentia pigmenti achromians²⁰, and Elis Van Crevald syndrome²¹.

Most commonly occurring in permanent dentition than in primary dentition .Maxillary teeth are most commonly involved³ lateral incisor in permanent and central incisor in primary dentition. Occurs uni or bilaterally. Observed more commonly in males²². Most previous reports have been made concerning the occurrence of this structure on the lingual aspect of the teeth. Few reports are available regarding their presence on the facial aspect of the tooth.

Classification

There is a wide variation in the size and shape of this anomaly .In order to have diagnostic criteria it has been classified into three types by Hattab et al^{1,7,21}.

Type 1:Talon:Refers to a morphologically well delineated additional cusp that prominently projects from the palatal {or facial} surface of a primary or permanent anterior tooth and extends at least half the



Fig.1 . Anamolous cusp on 22-Intra oral view



Fig.2. Model of the patient showing Anamolous cusp



Fig.3.- V-shaped radiopacity extending from cement enamel junction to incisal edge

distance from the cement enamel junction to the incisal edge.

Type 2: Semi Talon: Refers to an additional cusp of a millimeter or more extending less than half the distance from cement enamel junction to the incisal edge. It may blend with the palatal surface or stand away from the rest of the crown.

Type 3: Trace Talon: An enlarged or prominent cingula and their variation; i.e. conical, bifid or tubercle like.

Radio graphically the appearance of a talon cusp is similar to that of normal tooth material, presenting with radiopaque enamel and dentine with or without extension of pulpal tissue²³. Typically, talon cusp looks like a V-shaped structure superimposed over the normal image of the crown with the point of the 'v' towards the incisal edge.

Clinically talons cusp may not pose any problems to the patient and may come up only as a diagnostic finding. Or its presence may cause problems such as food lodgement, caries, per apical lesions, irritation to the tongue during mastication and speech, other soft tissue irritation, compromised esthetics, occlusal interference, tempero mandibular joint pain, periodontal problems because of excessive force²⁵.

Management

Varies from no treatment to extensive management. The developmental grooves susceptible to caries should be prophylactically sealed. If removal of talon cusp is planned [preferably after the root formation is complete] reduction should be gradual and on consecutive visits at 6-8 week intervals, to allow for reparative dentine formation for pulpal protection followed by application of a desensitizing agent, preferably fluoride varnish. Partial reduction with composite camouflage can also be done.

Case Report

A healthy looking 30 year old male Indian visited for a routine dental check up and teeth cleaning. On examination soft tissue appeared normal except for mild inflammation of the marginal gingiva in molar and mandibular anterior region. All permanent teeth were present in class 1 molar relation with crowding of mandibular anterior teeth. Grade 1 Calculus and stains were present.

Labial aspect of the left maxillary lateral incisor exhibited an anomolus cusp extending from cement enamel junction to incisal edge. Conical in shape measuring 7mm from cemento enamel junction to

incisal edge 3mm mesiodistally and facially prominent upto 3mm.(Fig.1 and Fig.2)

Patient was unaware of the same and its presence was not posing any inconvenience to the patient in speech and mastication. There were no signs of food lodgement and it was not causing any occlusal interference. Tooth responded normally to vitality test.

Radiographic examination of the same on an intra oral periapical radiograph showed a V-shaped radiopacity extending from cement enamel junction to incisal edge point of the 'V' towards the incisal edge. Shadow of the outline of the lateral incisor was appreciable. Pulpal extension could be traced towards the base of the cusp. No periapical pathology was detected.(Fig.3)

Discussion

Based on the clinical and radiographic appearance of the dental anomaly a diagnosis of a facial talons cusp was made and was graded as Type -1 Talon based on the classification given by Hatabb et al [3] Patient was made aware of the presence of the anomaly and a partial reduction with composite camouflage was suggested as a way of cosmetic treatment. But, since the patient was not facing any particular problems due to its presence he was not keen on any treatment for the same. oral prophylaxis was done and patient was advised regular follow up. With patients consent a model was made and pictures of the talons cusp were taken.

CONCLUSION

Prevalence of talons cusp in Indian population has been sited as 7.7%.among this presence of the cusp facially is all the more rare. Our attempt is to add to the growing data of information regarding the occurrence of this dental anomaly.

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