ISSN: 2581-5989
PubMed - National Library of Medicine - ID: 101738774

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume – 6, Issue – 1, January - 2023, Page No. : 17 - 20

Talon Cusp: Case Study

[1]Ghali Mukhlef Alshammari, Orthodontics Specialist, Al Yamamah Hospital, Ministry of Health, Riyadh, Saudi Arabia

[2]Hala Hmod Alshammari, General Dentistry, Al Yamamah Hospital, Ministry of Health , Riyadh, Saudi Arabia

[3]Rahmah Mohammed Alanazi, General Dentistry, Alfarabi Colleges, Riyadh Saudi Arabia

[4]Hajr Hmoud Alshammari, General Dentistry, Alfarabi Colleges, Riyadh Saudi Arabia

Corresponding Author: Hajr Hmoud Alshammari, General Dentistry, Alfarabi Colleges, Riyadh Saudi Arabia

Citation of this Article: Ghali Mukhlef Alshammari, Hala Hmod Alshammari, Rahmah Mohammed Alanazi, Hajr Hmoud Alshammari, "Talon Cusp: Case Study", IJDSIR- January - 2023, Volume – 6, Issue - 1, P. No. 17 – 20.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Talon cusps are cusp-like projections that extend in a varied direction toward the incisal edge of the anterior tooth from the cemento-enamel junction. They are a very unusual developmental abnormality. The anterior teeth's palatal/lingual surfaces are where it typically appears. It is made up of dentine, enamel, and varying amounts of pulp tissue, according to studies. There are very few cases in the literature of this cusp being present on the anterior tooth facial surface. Talon Cusps primarily have aesthetic and practical consequences. A thorough understanding of the current clinical entity and its difficulties is necessary for management. Future issues can be prevented to a great extent by early recognition and treatment. In the current case, a preventive enameloplasty was performed on a 31-year-old male patient who had a Talon Cusp on the mandibular left-central incisor to prevent the accumulation of stain and debris.

Keywords: Talon cups, Junction, Evaginated

Introduction

Talon cusps (TC) are extraneous, talon-shaped cusps that sprout from the lingual or facial surface of a tooth's crown and extend at least halfway between the cemento-enamel junction and the incisal edge [1]. Windell initially characterized it in 1887, and Mitchell later reported it in 1892 [2].

The words dens evaginatus, supernumerary cusp, horn, hyperplastic cingulum, evaginated odontome, cusped cingulum, accessory cusp, and supernumerary lingual tubercle have all been used to refer to this characteristic [3].

According to a study on Talon Cusps in a permanent dentition, maxillary incisors (33%) and mandibular incisors and canines (3%) were the most and least frequently affected, respectively.(4)

Only a few numbers of cases with facial Talon Cusp have been documented in the literature thus far.

Typically, Talon Cusp is observed on the palatal or lingual surfaces of the maxillary or mandibular anterior teeth. [5] Talon Cusps primarily have aesthetic and practical consequences. A thorough understanding of the current clinical entity and its difficulties is necessary for management. Future issues can be prevented to a great extent by early detection and treatment. In this example, a preventive enameloplasty was done on a left mandibular central incisor in a 31-year-old man with a face Talon Cusp to prevent the buildup of debris and discoloration.

Case report

In the current case report, a male patient, age 31, visited the dental office for a regular dental examination. The patient's medical background includes Type 1 diabetes. On a general checkup, there were no anomalies found. Upon intraoral inspection, the left central incisor of mandible was found to complain of a talon cusp protruding from the facial surface reaching the incisal edge.

On either side of the talon cusp, there were noticeable brownish extrinsic stains. Tooth vitality is normal, and no signs of cavities were found. It was recommended to perform a preventive enameloplasty as the patient had no clinical symptoms other than the stagnation of debris and the stains, in order to prevent any potential complications. In addition, fluoride and a desensitizing agent (potassium nitrate in paste form) will work as preventive measures to lessen sensitivity and promote the creation of reparative dentine, which will protect the pulp, respectively. The patient was also instructed to visit for follow-up every 60 days.

Discussion

The cause of the TC's formation is uncertain. There has been a call for a multifactorial etiology that takes into account both genetic and environmental components. Talon cusps [6] can appear alone or in association with dental anomalies such mesiodens, immature or impacted teeth, peg-shaped maxillary incisors, dens invaginatus, cleft lips, bilateral gemination, and fusion. [7] Additionally, it has been linked to a number of systemic diseases, including Rubinstein-Taybi syndrome, Incontinentia pigmenti achromians disorder, Mohr syndrome (orofacial-digital II), Sturge-Weber syndrome (encephalotrigeminal angiomatosis), and Ellisvan Creveld syndrome. [7] The majority of the time, it is unilateral, but there have also been reports of bilateral examples, including numerous and double talon cusps. No more connected anomaly was noticed in the current situation.

This oddity comes in a broad range of sizes and shapes. Based on its size and shape, it was divided into three types: talon, semi-talon, and trace talon [6]. the present case can be categorized as a Type I talon because it was discovered projecting on the face aspect from the cemento-enamel junction nearly to the incisal border of the right mandibular central incisor.

Clinical issues caused by the presence of (Talon cusps) TCs include stagnation of cariogenic debris, periapical lesions, irritation of the tongue during speech and chewing, irritation of other soft tissues, poor esthetics, and occlusal interference that could result in an unintentional cusp fracture. Periodontal issues brought on by high occlusal force include periodontal disorders, displacement of the afflicted tooth, and pain in the temporomandibular joint [9]. When a big TC is present on the face aspect, it is aesthetically unappealing and causes pathological and functional issues. Occlusal obstruction and lip injury are functional consequences.

The deep grooves that connect the cusp to the tooth may serve as a stagnation point for debris and plaque, develop caries, and lead to periapical disease [10]. There

was no sign of caries or periapical disease in the present case, but the facial TC functioned as a source of stagnation for debris and brownish stains on the labial aspect of the tooth.

The individual presentation and complications of TC determine management. Small TCs have no symptoms and don't require any care. Deep developing grooves necessitate easy preventative actions, like fissure sealing and composite resin restoration, according to [6]. In the event of occlusal interference, topical applications of fluoride and desensitizing medicines can be used after gradually and periodically reducing the bulk of the cusp. [11] In some circumstances, root canal therapy or complete cusp reduction with calcium hydroxide pulpotomy may be necessary. When there is tooth displacement or misalignment of the afflicted or opposing teeth, orthodontic correction may be required [12].

In this instance, preventive enameloplasty was chosen to prevent stagnation of the debris. This was followed by topical fluoride and desensitizing agent treatment to lessen sensitivity and encourage the production of reparative dentine for pulp protection. A regular clinical and radiological follow-up was suggested to the patient.

References

1. Batra P, Enocson L, Hagberg C. Facial talon cusp in primary maxillary lateral incisor: a report of two unusual cases. Acta Odontol Scand. 2006;64(2):74-78. doi:10.1080/00016350500443347
2. Rao PK, Mascarenhas R, Shetty SR. Facial talon in mandibular incisor: An unusual occurrence. Dent Res J (Isfahan). 2011 Oct;8(4):229-31. doi: 10.4103/1735-3327.86048. PMID: 22135696; PMCID: PMC3221092.
3. Patil R, Singh S, Subba Reddy VV. Labial talon cusp on permanent central incisor: a case report. J Indian Soc Pedod Prev Dent. 2004;22(1):30-32.
4. Özkan G, Toptaş A, Güneri P. The characteristics and occurrence of the talon cusps in Turkish population: a retrospective sample study. Surg Radiol Anat. 2016;38(9):1105-1110. doi:10.1007/s00276-016-1653-6
5. Oredugba FA. Mandibular facial talon cusp: case report. BMC Oral Health. 2005;5:9. Published 2005 Dec 8. doi:10.1186/1472-6831-5-9
6. Nalin Kumar S, Ranganathan K, Umadevi M, Joshua E, Saraswathi TR. Talon cusp: an overview with case reports of 3 clinical variants. Indian J Dent Res. 2004;15(1):28-31.
7. Prabhu R, Chatra L, Shenai P, et al. Mandibular facial talon cusp: a rare case report. Ann Med Health Sci Res. 2014; 4(Suppl 1):S35-S37. doi:10.4103/2141-9248.131711
8. Cubukcu CE, Sonmez A, Gultekin V. Labial and palatal talon cusps on geminated tooth associated with dental root shape abnormality: a case report. J Clin Pediatr Dent. 2006;31(1):21-24. doi:10.17796/jcpd.31.1.a5101676k6714351
9. Hattab FN, Yassin OM. Bilateral talon cusps on primary central incisors: a case report. Int J Paediatr Dent. 1996;6(3):191-195. doi:10.1111/j.1365-263x.1996.tb00241.x
10. Mellor JK, Ripa LW. Talon cusp: a clinically significant anomaly. Oral Surg Oral Med Oral Pathol. 1970;29(2):225-228. doi:10.1016/0030-4220(70)90089-7
11. Hicks J, Flaitz C, Ellis R, Westerman G, Powell L. Primary tooth enamel surface topography with in vitro argon laser irradiation alone and combined fluoride and argon laser treatment: scanning electon

microscopic study. Pediatr Dent. 2003;25(5):491-496.

12. Sachdeva GS, Malhotra D, Sachdeva LT, Sharma N, Negi A. Endodontic management of mandibular central incisor fused to a supernumerary tooth associated with a talon cusp: a case report. Int Endod J. 2012;45(6):590-596. doi:10.1111/j.1365-2591.2012.02029.x