Case Reports
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Ulectomy as a treatment for permanent tooth retention due to gingival fibrosis. Case report.

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Abstract: Tooth eruption is considered as the axial movement of a tooth from its original position in the bone to its functional occlusal position in the oral cavity. In this way, tooth eruption could be considered part of childhood development and growth. When there is a delay in tooth eruption, there are various factors that could cause it, among them is gingival fibrosis, which can be corrected through a procedure called Ulectomy consists of the excision or removal of the tissue that interrupts the eruption process of a tooth. Below, we present a case of an 8-year-old boy, who comes to the clinic presenting with gingival fibrosis at the level of teeth 11 and 21, whose treatment was surgical in order to expose the crowns of the teeth. In conclusion, having knowledge about the chronology of tooth eruption is of great importance, since in this way we could shorten the delay time. The precise and accurate diagnosis of the impaction of dental units due to gingival fibrosis is essential to be able to implement effective treatments such as Ulectomy, with which we manage to help our patients by generating quality of life, from a physiological occlusion, improvement in phonation and feeding, and functional aesthetics, returning security and self-esteem in themselves.

Key words: Gingiva, Gingival Diseases, Oral Surgical Procedures, tooth eruption.

Ulectomía como tratamiento para retención dentaria permanente por fibrosis gingival. Reporte de caso.

Resumen: La erupción dental se considera como el movimiento axial de un diente desde su posición original en el hueso hasta su posición oclusal funcional en la cavidad bucal. De esta manera se podría considerar la erupción dentaria como parte del desarrollo y crecimiento infantil. Cuando existe un retraso de la erupción dentaria hay diversos factores que podría generarla, entre ellos está la fibrosis gingival, la cual se puede corregir mediante un procedimiento llamado, Ulectomía consiste en la escisión o extirpación del tejido que interrumpe el proceso de erupción de un diente. A continuación, presentamos un caso de un niño de 8 años de edad, el cual acude a consulta presentando Fibrosis gingival a nivel de las piezas 11 y 21 cuyo tratamiento fue quirúrgico con el fin de exponer las coronas de las piezas dentarias. En conclusión, Tener conocimiento sobre la cronología de erupción dentaria es de gran importancia, ya que de esta manera podríamos acortar el tiempo del retraso. El diagnóstico preciso y certero de la impactación de unidades dentarias por fibrosis gingival es imprescindible para así poder implementar tratamientos eficaces como lo es la Ulectomía, con lo cual conseguimos ayudar a nuestros pacientes generándoles calidad de vida, desde una oclusión fisiológica, mejoría en la fonación y en la alimentación, y una estética funcional, devolviendo la seguridad y la autoestima en sí mismos.

Palabras clave: Encía, fibromatosis gingival, Cirugía bucal, erupción dental.

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Ulectomia como tratamento para retenção dentária permanente por fibrose gengival. Relato de caso.

Resumo: A erupção dentária é considerada como o movimento axial de um dente desde sua posição original no osso até sua posição oclusal funcional na cavidade oral. Desta forma, a erupção dentária poderia ser considerada parte do desenvolvimento e crescimento infantil. Quando há atraso na erupção dentária, vários são os fatores que podem causar isso, entre eles está a fibrose gengival, que pode ser corrigida através de um procedimento chamado ulectomia que consiste na excisão ou retirada do tecido que interrompe o processo de erupção de um dente. A seguir apresentamos o caso de um menino de 8 anos, que chega ao ambulatório apresentando fibrose gengival ao nível dos dentes 11 e 21, cujo tratamento foi cirúrgico para exposição das coroas dos dentes. Concluindo, ter conhecimento sobre a cronologia da erupção dentária é de grande importância, pois desta forma poderíamos encurtar o tempo de atraso. O diagnóstico preciso e preciso da impactação de unidades dentárias por fibrose gengival é fundamental para podermos implementar tratamentos eficazes como a Ulectomia, com a qual conseguimos ajudar nossos pacientes gerando qualidade de vida, desde uma oclusão fisiológica, melhora na fonação e alimentação, e estética funcional, devolvendo segurança e autoestima em si mesmos.

Palavras-chave: Gengiva, Fibromatose Gengival, Cirurgia Bucal, Erupção Dentária.

Introduction

Dental eruption is defined as the axial movement of a tooth from its original position within the bone to its functional occlusal position in the oral cavity.[1,2] It is considered a physiological process that involves the migration of the tooth germ from its intraosseous location. Thus, dental eruption can be regarded as an integral component of childhood growth and development.[3]

During the development of occlusion, the mixed dentition stage plays a significant role, as it involves crucial changes that influence the establishment of a normal occlusion, systemic health, and the growth and development of the craniofacial complex. This stage begins around the age of six, when the first permanent tooth erupts, and concludes with the exfoliation of the last primary tooth, completing the permanent dentition.[1,4]

Several factors have been identified that may influence the chronology of dental eruption, including supernumerary teeth, ankylosis, ectopic eruption, odontogenic and non-odontogenic tumors, nutritional deficiencies, HIV infection, Gardner syndrome, and dense fibrous tissue in the incisal region. Additionally, early childhood caries, trauma, infections, lack of space, and certain medications—such as cyclosporine, which may induce eruption cysts—are also considered risk factors.[1,5,6]

Primary teeth rarely present with impaction, with ankylosis being the more common condition associated with them. However, among permanent teeth, the maxillary central incisors receive the greatest attention regarding eruption chronology, due to their direct impact on facial esthetics and the psychological well-being of the child, as well as their influence on speech and mastication. Some studies have shown that tooth retention is associated with gingival fibrosis, a condition more frequently observed in incisors and canines.[3]

Ulectomy, also known as a surgical window, is a procedure that consists of removing (excision) the gingival tissue covering the occlusal or incisal surfaces of primary or permanent teeth that, for various reasons, lack the necessary force to erupt and require additional time to reach their position in the dental arch. This intervention helps prevent future complications, such as pericoronitis.[3,7]

This procedure is indicated in cases where eruption cysts fail to resolve spontaneously, in the presence of gingival fibrosis, in delayed dental eruption, or when the physiological eruption process causes discomfort or pain. According to Boj, if tooth eruption is obstructed, the barrier should be removed, provided that at least two-thirds of the root has formed.[7,8]

Ulectomy may be performed using a scalpel, laser, or electrocautery. Elliptical, circular, or oval incisions are made over the tissue, on the incisal or occlusal surface. The extension of these incisions should adequately expose the superficial border of the retained teeth, thus eliminating any obstruction [9].

The objective of this study is to present the most relevant aspects related to delayed eruption caused by gingival fibrosis, in order to achieve an accurate diagnosis and provide an appropriate treatment plan.

Case Presentation

An 8-year-old male patient presented to the private practice "Dental Studio By Bascom," located in Valencia, Venezuela, accompanied by his mother. The patient was asymptomatic at the time of consultation; however, the mother reported the absence of the "front teeth," referring to the permanent maxillary central incisors, as well as a gingival enlargement in the corresponding region. She indicated that approximately 1 year and 8 months had passed since the exfoliation of primary teeth 51 and 61. This condition was negatively affecting the patient's speech, feeding, esthetics, and self-esteem.

Following clinical and radiographic evaluation, a diagnosis of gingival fibrosis associated with teeth 11 and 21 was established. The treatment plan was presented to the mother, who authorized the surgical procedure after signing the informed consent form. Additionally, written informed consent was obtained from the legal guardian for the use of clinical information and the publication of case images for scientific purposes, ensuring the patient's anonymity and confidentiality at all times. Due to the evident gingival fibrosis in the incisal region, ulectomy was selected as the treatment of choice.

A thorough clinical examination confirmed that teeth 11 and 21 were entirely covered by a thick layer of gingival tissue. The gingiva exhibited enlargement, a pale pink color, and a smooth, firm texture. Premature loss of tooth 83, narrow arches, and absence of physiologic spacing in the mandibular arch were also noted (Figure 1). Carious lesions were observed on the buccal surface of tooth 63 and the occlusal surface of tooth 64 (Figures 3 and 5).

As complementary diagnostic studies, a panoramic radiograph was obtained. Teeth 11 and 21 exhibited two-thirds of root formation

Figure 1. *Frontal view of the initial clinical situation. Clinical manifestation of gingival fibrosis in the anterior maxillary region with the absence of the maxillary central incisors. Hyperplastic gingival tissue with increased volume is observed, partially covering the edentulous area and hindering normal tooth eruption.*

(Nolla stage 8) and were covered by the previously described gingival tissue, with no bone tissue obstructing their eruption (Figure 2).

Based on the clinical findings and the complementary diagnostic studies performed, a diagnosis of gingival fibrosis associated with teeth 11 and 21 was established. The treatment plan was presented to the patient's mother, who authorized the surgical procedure after signing all informed consent documents. Due to the evident gingival fibrosis present in the incisal region, ulectomy was selected as the treatment of choice.

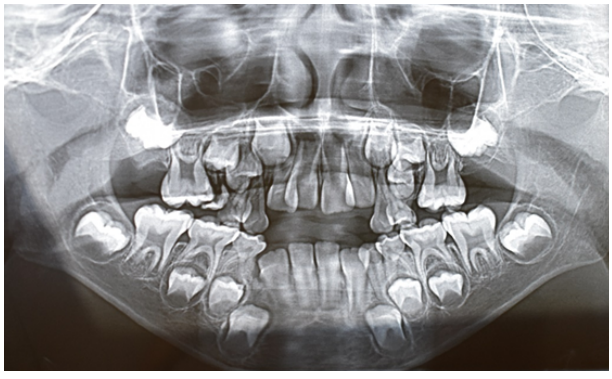

Figure 2. *Panoramic radiograph showing the mixed dentition in the developmental stage. The developing permanent teeth are visible, with particular attention to the anterior maxillary region, where delayed eruption of the maxillary central incisors is evident, correlating with the clinical gingival fibrosis. No apparent bone abnormalities are identified.*

Subsequently, it was decided to perform the procedure. Antisepsis of the patient and the area to be treated was initiated, followed by rinsing with 0.12% chlorhexidine gluconate. The area was dried with sterile gauze to apply topical anesthesia (5% lidocaine gel). After this, a supraperiosteal (infiltrative) anesthetic technique was administrated in the area of intervention, using a dental syringe with local anesthetic (2% lidocaine with 1:100,000 epinephrine, 1.8 ml cartridge) and an extra-short 30G needle. After a waiting period of approximately 5 minutes to ensure the onset of the anesthetic effect, the absence of pain response was confirmed, and the incision of the tissues was initiated. A No. 15 scalpel blade on a No. 3 handle, was used to outline the incisal portion of the crowns of teeth 11 and 21, resulting in an elliptical incision to create a surgical window. The fibrous tissue covering the teeth was removed with the aid of the scalpel blade and hemostatic forceps, followed by the separation of the remaining gingival fibers in the incisal area using a periosteal elevator (Molt #9), with the aim of fully exposing the incisal edges of teeth 11 and 21. The area was irrigated with physiological saline solution (0.9% sodium chloride), and subsequently, hemorrhage was controlled by applying pressure with sterile gauze (Figure 3).

At the end of the procedure, postoperative instructions were provided to the patient and his mother. They were advised not to

Figure 3. *Clinical photograph, occlusal view. Immediate postoperative image following ulectomy in the anterior maxillary region. The surgical site is visible, showing exposure of the incisal edges of teeth 11 and 21. No signs of active bleeding or visible complications are observed at the time of capture.*

spit or rinse vigorously, to avoid the use of straws, and to refrain from placing any objects in the surgical site. Proper oral hygiene was emphasized. Analgesics and anti-inflammatory medication were prescribed (6 cc of ibuprofen 100 mg/5 ml every 8 hours for 3 days, oral suspension), along with 0.12% chlorhexidine gluconate mouth rinses twice daily, in the morning and evening, for 3 days. No additional postoperative medication was required.

During the postoperative follow-up, a 7-day control appointment was conducted, at which the patient showed favorable progress and appropriate wound healing. Neither the patient nor the guardian reported complications or postoperative discomfort. A subsequent follow-up visit was conducted 2 months after the procedure, revealing complete healing of the gingival tissue and partial eruption of the crowns of teeth 11 and 21 (Figures 4 and 5). Continuation of restorative and orthodontic treatment was interrupted due to access barriers related to the legal guardian's availability, resulting in the absence of further follow-up appointments.

Figure 4. *Clinical photograph, frontal view. Two-month postoperative follow-up showing physiological eruption. The crowns of teeth 11 and 21 are visible following the removal of the fibrous tissue.*

Figure 5. *Clinical photograph, occlusal view. Two-month postoperative follow-up showing physiological eruption. The crowns of teeth 11 and 21 are visible following the removal of the fibrous tissue.*

Discussion

Proper dental eruption prevents functional disturbances such as masticatory and phonetic difficulties,

while also supporting the stability of the stomatognathic system. Furthermore, it contributes to the patient's psychological well-being by improving self-esteem, social integration, and overall quality of life [10].

Gingival fibrosis is a frequent finding in the maxillary central incisors, often associated with early loss of primary teeth and friction from food against the mucosa. This process leads to a fibrous thickening of the connective tissue, histologically characterized by abundant acellular collagen, distinguishing it from normal mucosal tissue [11].

In the present case, ulectomy proved to be a conservative and effective treatment, allowing the partial eruption of the incisors without complications. Alternative therapeutic options include observation, surgical exposure with orthodontic traction, and the use of laser techniques, each with its own advantages and limitations. The main limitations of this report include being a single case with limited follow-up and lacking histopathological analysis; however, it demonstrates the effectiveness of ulectomy in managing eruption delay caused by gingival fibrosis.

The relevance of this case lies in highlighting ulectomy as a simple, predictable, and clinically valuable intervention for managing fibrous retention associated with maxillary central incisors in pediatric patients. Although this condition is relatively common, its timely diagnosis and appropriate treatment selection are not always approached consistently in pediatric dental practice. This report contributes to the existing body of knowledge by showing how a minimally invasive technique can promote physiological eruption, avoid more complex procedures, and improve the child's clinical experience. Moreover, the case reinforces the importance of early assessment and conservative management as fundamental pillars in pediatric dental care in Latin America.

Conclusion

1. Gingival fibrosis may cause delayed eruption of the maxillary central incisors, affecting both function and esthetics in pediatric patients.

2. Ulectomy proved to be a conservative, effective, and safe procedure for removing obstructive tissue, facilitating tooth eruption, and improving the patient's quality of life.

3. This case highlights the importance of early diagnosis and individualized treatment planning to optimize functional, esthetic, and psychological outcomes.

Conflicts of Interest and Funding

No conflicts of interest are reported.

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