Supernumerary teeth in the midline, an interesting case for clinical practice

Dientes supernumerarios en la línea media, un caso interesante para la práctica clínica

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ABSTRACT

Introduction: sometimes patients with supernumerary teeth come to the dental clinic. For this reason, knowledge of the morphological characteristics of each dental group is useful to differentiate them from those of the normal arch. Case Presentation: the case of an apparently healthy 12-year-old male patient who attended the Maxillofacial Surgery service, referred from Primary Health Care for the extraction of "a supernumerary" was presented. Upon questioning, the mother stated that the child received orthodontic care around eight years of age and that under this treatment he was indicated and performed surgery "because he had an extra tooth." Once the case was assessed, the presence of two supplementary supernumeraries in the maxillary midline was diagnosed. The tooth that had been extracted during the previous orthodontic treatment, referred by the mother, was the upper left central incisor (21) and not a supernumerary. The ectopic 11 was extracted, to leave in the dental arch the two supernumeraries that were of similar anatomy and were completely erupted. Conclusions: it was concluded that supernumerary teeth of the midline, when they have anatomical characteristics similar to those that normally occupy the dental arch, can be confused with these; hence the importance of a thorough clinical assessment.

RESUMEN

Introducción: en ocasiones acuden a la clínica dental pacientes con dientes supernumerarios. Por ello, el conocimiento de las características morfológicas de cada grupo dentario es útil para diferenciarlos con los de la arcada normal. Presentación de caso: se presenta el caso de un paciente masculino de 12 años aparentemente sano que acude al servicio de Cirugía Maxilofacial, remitido de la Atención Primaria de Salud para la extracción de "un supernumerario". Al ser interrogada la madre, esta refirió que el niño recibió atención de ortodoncia alrededor de los ocho años y que bajo ese tratamiento se le indicó y se le operó "porque tenía un diente extra". Una vez valorado el caso, se diagnosticó la presencia de dos supernumerarios suplementarios en línea media maxilar. El diente que había sido extraído durante el tratamiento de ortodoncia anterior, referido por la madre, era el incisivo central superior izquierdo (21) y no un supernumerario. Se extrajo el 11 ectópico, para dejar en la arcada dentaria los dos supernumerarios que eran de similar anatomía y estaban completamente erupcionados. Conclusiones: se concluye que los dientes supernumerarios de la línea media, cuando tienen características anatómicas similares a los que normalmente ocupan la arcada dentaria, pueden confundirse con estos; de ahí la importancia de una evaluación clínica exhaustiva.

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INTRODUCTION

Supernumerary teeth (ST) also known as hyperdontia are those that exceed the number of normal teeth in the oral cavity. In human history they have been frequently observed since Paleolithic times[1,2].

They have been grouped and classified according to their form in supplementary and dysmorphic; and the latter subclassified as: conoid, tuberculate and rudimentary [3].

The prevalence of ST varies markedly in the permanent dentition as well as between the populations studied; an interval between 0,5 to 3,8 % in the world population is calculated. They predominate mainly in males and it is common to find them in the anterior region of the maxilla. They can be single, multiple, unilateral or bilateral. Those located in the midline of the maxilla are called mesiodens and their prevalence is 0,15 to 1,9 % in the general population. Mesiodens occurs in 0,45 % of Caucasians; 0,4 % in Finns; 1,44 % in Norwegians and 2,2 % in Hispanics[2,3,4,5].

In Latin America there is no general report of the total prevalence in the population, however, according to Gálvez Cubas et al[6]. there are different reports published in each region; for example, in Mexico 2,8 % of DS is registered, in Venezuela and Colombia, 5,15 % and 1,1 % respectively. In Cuba, the scientific literature [7,8] only includes case reports that do not allow determining the incidence of ST in the population.

The diagnosis of ST requires the development of an adequate clinical history, an exhaustive clinical and radiological evaluation, as well as performing it as early as possible[3]. Also, important aspects must be taken into account, such as: the orthodontic indication, the anatomical location, the morphology, the dental angulation and the presence of rotations[4].

The treatment of a supernumerary tooth, although it is usually an extraction, should not underestimate the multivariate analysis. A comprehensive surgical-orthodontic therapeutic plan should be drawn up, taking into account the type of ST, its position, its potential effect on adjacent teeth and the relationship with proximal teeth[3,9].

Sometimes situations of patients with supernumerary teeth occur in the dental office. For this reason, knowledge of the morphological characteristics of each dental group is useful to differentiate them from those of the normal arch. Highlighting the importance of its correct diagnosis, since this is the determinant of therapeutic decision-making, avoids making certain errors in clinical practice; hence the importance of its communication to the scientific community.

PRESENTATION OF THE CASE

Male patient, 12 years old, black race, apparently healthy, who attended the consultation of the Maxillofacial Surgery service of the Pediatric Teaching Hospital: "Eliseo Noel Camaño", of Matanzas province, referred from the Primary Health Care for the extraction of "a supernumerary".

Upon questioning, the mother stated that the child received orthodontic care around eight years of age and that under this treatment he was indicated and underwent surgery "because he had an extra tooth."

The intraoral clinical examination revealed the presence of two teeth in the area of the upper central incisors with smaller crowns in relation to the crown of the lateral incisors and with a slight anomaly in their shape, slight distobuccal rotation and in distoversion. In addition, the presence of an ectopic tooth was observed in vestibulogression between 11 and 12, with a large crown, with an appearance similar to that of the upper central incisors. Edge-to-edge bite in the incisive area, therefore protruding and exceeding 0 mm (Fig. 1).

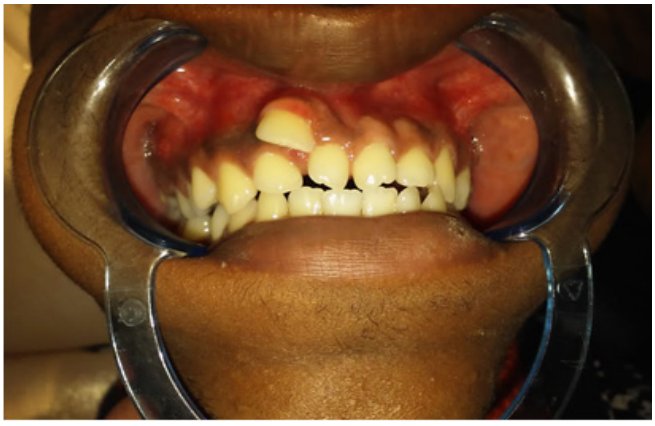

Figure 1. Intraoral view, the presence of an ectopic tooth in upper arch.

Periapical X-rays of the area are distinguished (Fig.2) observing that the teeth that were in the position of the central ones had much smaller roots than those of the adjacent lateral ones, while the root of the "ectopic tooth" was similar to the of a central incisor.

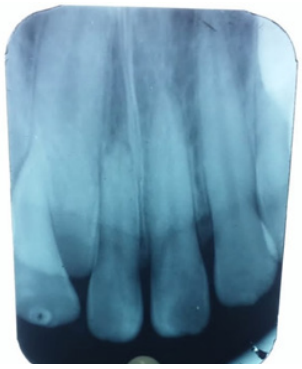

Figure 2. Periapical X-rays, the root of the ectopic tooth is large, straight and robust.

The interrogation, clinical and radiographic examination allowed to diagnose the presence of two supplementary supernumeraries in the maxillary midline; in this case, the presence of a bilateral mesiodens.

It was concluded that the "extra" tooth that had been extracted during previous orthodontic treatment, referred by the mother, was the upper left central incisor (21) and not a supernumerary.

Ensuring the aesthetics of the patient at this time was paramount; with no other alternative, the ectopic 11 was extracted, thus leaving the two supernumeraries in the dental arch, which had similar anatomy and were completely erupted.

During the operative approach there were no complications and the patient showed a satisfactory evolution after dental extraction.

After the total recovery of the intervened area, a joint orthodontic-prosthetic treatment was started in order to obtain an optimal aesthetic and functional result.

The prosthetic treatment was necessary due to the microdontia of the supernumeraries; therefore, it was necessary to make two aesthetic and functional cap crowns, which after labializing them with the orthodontic movement, achieved a functional overhang and overhang.

For the dissemination of this article, the informed consent of the patient's legal guardian was obtained, taking into account the ethical standards established in the Declaration of Helsinki.

DISCUSSION

McBeain et al[10]. mentions that the incidence of supernumerary teeth is higher in male patients, which coincides with the present clinical case. The results reported by Amoroso [11] disagree in this sense since he obtained a higher prevalence of the female sex.

Dias dos Santos et al[12]. states that supernumerary teeth are more prevalent in the permanent dentition. In the present study, the supernumerary teeth belong to this dentition.

Romero et al[2]. reports the different locations of supernumerary teeth, with the midline of the maxilla (mesiodens) being the most common; as presented in the patient studied.

The scientific literature points out the complications associated with a mesiodens, among them, the deviation of the eruption of the tooth; which is evidenced in the vestibular regression of 11 presented in this report[1].

According to Azuara et al[5]. the supernumerary teeth, in general, remain impacted, which differs from what was found in the present case, since the two supplementary teeth were completely erupted.

Oropeza[1] reports reports that dysmorphic supernumeraries occur more frequently; however, the teeth in question had a morphology similar to that of the maxillary central incisors (supplemental supernumerary). The similarity of a supernumerary tooth with one of the normal arch can cause confusion when it comes to issuing a diagnosis, as it happened at the beginning in this case.

There are defining characteristics that allow the clinician to differentiate a supplemental supernumerary tooth from one of the normal arch, such as the length and thickness of the root; hence the importance attributed by the authors to their knowledge.

Patients with supernumerary teeth require multidisciplinary treatment, where orthodontists, pediatric dentists, oral surgeons and radiologists must interact; in order to achieve successful results[11]. For Azuara et al[5]. the treatment plan must consider a multidisciplinary approach, in which the

participation of the orthodontist is essential.

In orthodontics, as in most specialties of medical sciences, the particularities of each individual are estimated and interdisciplinary management is carried out to achieve comprehensive care, in this case: orthodontics, maxillofacial surgery and prosthetics [13].

According to what was stated by Pulido et al[13]. early diagnosis is considered essential in this entity, with interdisciplinary management where there is an adequate approach technique and correct planning, improving the patient's prognosis.

Before proceeding with the extraction of a tooth, the following must be carried out: a correct clinical history, an adequate exploration of the oral cavity, especially of the tooth to be extracted and of the neighboring anatomical structures and, within the complementary studies, a detailed radiographic study. In order to reach conclusions and establish a diagnosis, an extensive assessment of the case must be made and, when necessary, receive the criteria of other specialists using interdisciplinarity.

The educational message of the article warns in making diagnostic and therapeutic decisions to guarantee good dental practices.

CONCLUSIONS

The supernumerary teeth of the midline, when they have anatomical characteristics similar to those that normally occupy the dental arch, can be confused with these; hence the importance of a thorough clinical assessment.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest. This manuscript has not been published in whole or in part, nor is it being evaluated by another journal.

AUTHORS` CONTRIBUTION

Lianne Laura de León Ramírez: conceptualization, data curation, formal analysis, research, methodology, project management, writing-revision and editing.

Damarys Calvo Pérez: data collection, resources, supervision, validation, writing-original draft.

Marisel García del Busto Chinea: visualization, validation, writing-original draft.

Liliana Abreu Pachón: visualization, validation, writing-review and editing.

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