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CASE REPORT

Supernumerary teeth treatment in the anterior region. Case report

Tratamiento de supernumerarios en zona anterosuperior. Presentación de un caso

Lena Torres Armas,* Maiyelín Llanes Rodríguez,§ Nurys Mercedes Batista González*,‖

ABSTRACT

Introduction: Supernumerary teeth result from alterations during the start and proliferation phases of dental development. The presence of any of them may cause retention of permanent teeth. **Objective:** With the intention of pointing out the importance of the diagnosis and early treatment of this alteration, a case is presented where in a simple manner the supernumerary teeth was removed and the retained tooth erupted successfully. **Case report:** Male patient, 8 years of age, with presence of supplementary teeth and retention of tooth #11. Extraction of the supernumeraries was performed and through a Hawley plaque and elastic occlusal harmony was achieved. **Conclusions:** Through an accurate diagnosis and a simple treatment subsequent occlusion complications can be avoided and the child's esthetics may be improved.

RESUMEN

Introducción: Los dientes supernumerarios se producen como resultado de alteraciones durante las fases de inicio y proliferación del desarrollo dental. La presencia de cualquiera de ellos puede ocasionar retención de los dientes permanentes. **Objetivo:** Con el propósito de mostrar la importancia del diagnóstico y tratamiento precoz de esta alteración, se presenta un caso donde, de manera sencilla, se eliminan los supernumerarios y se logra el brote del diente retenido. **Presentación del caso:** Paciente masculino de ocho años, con presencia de dientes suplementarios y retención del 11, al cual se le realiza la exodoncia de los supernumerarios, y con placa de Hawley y elásticos se logra armonía oclusal. **Conclusiones:** A través de un diagnóstico certero y un tratamiento sencillo, se pueden evitar complicaciones oclusales posteriores y mejorar la estética del niño.

Key words: Diagnosis, supernumerary teeth, dental retention.
Palabras clave: Diagnóstico, dientes supernumerarios, retención dentaria.

INTRODUCTION

Dental formula may be altered by an increase or decrease in the number of teeth. Increase or hyperdontia is due to supernumerary teeth and decrease or hypodontia may be caused by extractions, retained teeth or by the congenital absence of the dental follicle.[1,2]

Supernumerary teeth are produced as a result of alterations during the initial and proliferation phases of dental development; in many cases it does not have a syndromic cause and inheritance is attributed as etiological factor: in families with a tendency to hyperdontia it is linked to a recessive gene associated with the X chromosome, so the highest prevalence occurs in men. The most accepted theory refers to an independent hyperactivity of the dental lamina.[2,3]

Supernumerary teeth are classified as supplementary teeth and accessories. Supplementary teeth are additional teeth that retain the morphology of the group to which they belong. Accessory teeth are additional teeth of arbitrary shape and depending on where they are located in the arch are called mesiodens or peridens. The presence of any of them can cause retention of permanent teeth that are close to the area of their location and serious aesthetic and functional disharmonies. Diagnosis is made by questionnaire, clinical examination and radiographic analysis.[1,4,5]

Supernumerary teeth should always be extracted; when retained, extraction should only be indicated if neighboring permanent teeth have completed their

* First grade Orthodontics Specialist. Assistant Professor.
§ Second grade Orthodontics Specialist. Auxiliary Professor.
‖ Stomatology Faculty of La Habana. Cuba.

Facultad de Estomatología «Raúl González Sánchez», Universidad de Ciencias Médicas de La Habana, Cuba.

root formation or when they interfere with the eruption of a permanent tooth.[6,7]

CASE REPORT

Male patient, 8 years old, Europoid ethnic group, good general condition, comes to the clinic because he feels that he has «long teeth». He presented a history of blood dyscrasia; onicophagia.

Physical examination showed a convex profile, lip incompetence, hypotonic upper lip, marked mentholabial fold, medium upper and lower lip insertions, slightly edematous gums; poor aesthetics.

The intraoral examination showed in the upper arch a deep palatal vault, ovoid arch shape, early mixed dentition; clinical absence of tooth #11. The right lateral incisor presented mesiolabial rotation, teeth #21 and 22 with mesiopalatal rotation; palatal position of tooth #22, and presence of 3 supernumerary teeth with alteration of the morphology.

The lower arch was ovoid-shaped with early mixed dentition and without clinical absence of any teeth. Teeth #31, 32 and 41 were in dystoversion and diastemas of approximately 1 mm were present between #31 and 41.

On examination of the occlusion, there was a 5 mm overjet between #21 and 31; a neutral occlusion of the temporary canines, permanent molars in neutral occlusion and mesial step of the second temporary molars. A dental midline assessment could not be established. Normal overjet was observed in the posterior region and anterior overbite was half a crown. syndromic classification of moyers was class I.

Model analysis: Upper Incisor Index resulted in 33.4 mm (Considering the radiographic diameter of tooth #11) and the lower, in 26.2 mm, which translates into a macrodontia. Upper tooth-bone discrepancy was -1.8 mm and the lower tooth, -1.4 mm. In the transverse measurements no alterations are detected.

The radiographic analysis revealed that tooth #11 was retained as well as the presence of 3 additional teeth in this area that prevented its eruption *(Figures 1 and 2)*.

DISCUSSION

Treatment began in December 2014, and after consultation with the specialist in hematology, the patient was referred to the Maxillo-Facial Surgery Department to perform the extraction of the supplementary teeth and the surgical exposure of the 11. A bracket was placed on that tooth to perform traction with orthodontic elastics and a Hawley type appliance with a hook added for that purpose *(Figures 3 and 4)*. The use of this appliance was indicated 24 hours a day only removing it for feeding and brushing; the elastics were changed every three days, and a follow-up consultation was scheduled every four weeks to make adjustments to the appliance and assess treatment progress.

After five months, the upper right central incisor was already in position; it only had one rotation. At that moment the use of elastics was eliminated and the appliance was changed for another removable Hawley

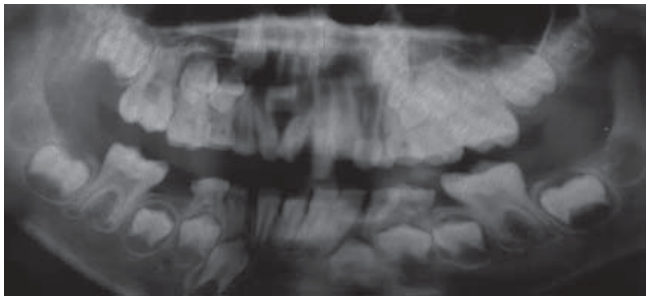

Figure 1. Panoramic radiograph. Presence of three supernumerary teeth in the upper anterior region.

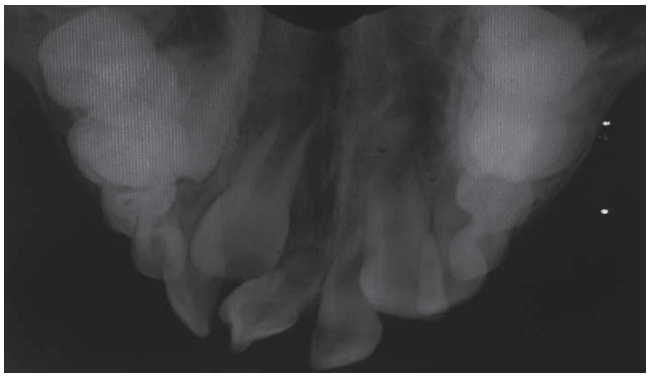

Figure 2. Occlusal radiograph. Three supernumerary teeth in the upper anterior area.

Figure 3. Traction of the retained upper central incisor (#11) and placement of Hawley-type appliance.

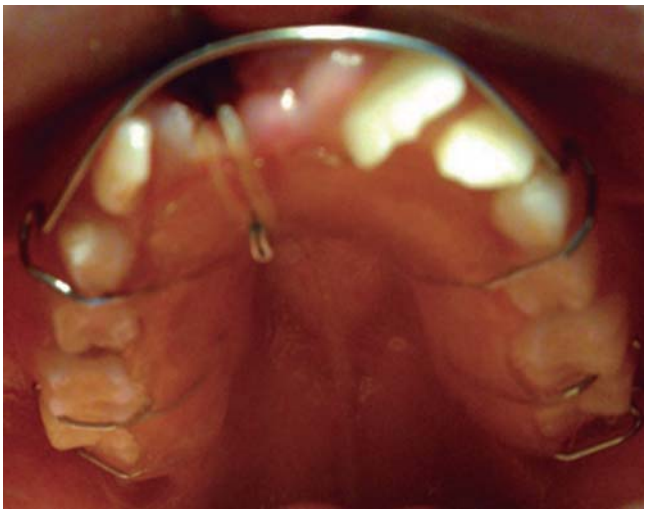

Figure 4. Hawley-type appliance with palatal hook and elastic for traction of the retained tooth.

type plate this time with a whip spring for the correction of the rotation *(Figure 5)*. In September 2015, in only 9 months, the patient already had his teeth in place with a normal overjet and all occlusal variables within the normal parameters for his age. Presently, only the eruption of permanent teeth is controlled.

CONCLUSIONS

By means of an accurate diagnosis and a simple treatment within the reach of General Dentists and Specialists, it is possible to provide solutions to cases such as this and to avoid subsequent occlusal complications that result in greater expenditure of economic resources; in addition to providing children with a better quality of life and minimizing psychological disorders due to aesthetic affectations that accompany poor dental position and absence of teeth.

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Figure 5. Nine months of treatment.

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Mailing address:
MSc. Dra. Lena Torres Armas
E-mail: lenatorres@infomed.sld.cu

MSc. Dra. Maiyelín Llanes Rodríguez
E-mail: mayelín.llanes@infomed.sld.cu

MSc. Dra. Nurys Mercedes Batista González
E-mail: nurysbatista@infomed.sld.cu