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CASE REPORT

Parallelization of a retained lower second molar. Case report

Paralelización de segundo molar inferior retenido. Reporte de un caso

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ABSTRACT

Introduction: The main objective of the present article is to report a parallelization method for a retained lower second molar. **Method:** A mini-implant was placed in order to use a spring with an uprighting bend which was directed to the dental organ #47 towards its correct position. **Results:** An adequate parallelization of the lower right second molar was achieved. **Conclusions:** The presented case shows an option for molar parallelization that attempts to maintain long-term stability which is one of the objectives of contemporary orthodontics.

RESUMEN

Introducción: El objetivo principal del presente artículo es reportar el método de la paralelización de un segundo molar inferior retenido. **Método.** Se colocó un miniimplante, para luego emplear un resorte en un doblez de la paralelización mediante el cual se dirigió el órgano dental 47 hacia su posición correcta. **Resultados:** Se logró la adecuada paralelización del segundo molar inferior derecho. **Conclusión:** El caso presentado muestra una opción de paralelización de un molar, que procura mantener la estabilidad a largo plazo, lo cual es uno de los objetivos de la Ortodoncia contemporánea.

Key words: Molar parallelization, retention, mini-implants.
Palabras clave: Paralelización de molares, retención, mini-implantes.

INTRODUCTION

Aretained tooth is one that has not erupted in the dental arch in the expected time.[1] The prevalence of second molar impaction is usually 0.3%, it is more frequent in the mandible than in the maxilla, and it occurs unilaterally. There is a slight preference for the female sex, and tipping towards mesial is more common.[2,3] In a study carried out by Choo S it was stated that retention of the second molar is between a 0.1 and 0.06% prevalence.[4,5] Bondemark et al observed disturbances in the eruption of the second molar in 2.3 per cent of the patients.[6]

The teeth that more frequently suffer from retention are: maxillary and mandibular third molars, maxillary canines and secondmandibular molars.[7-10]

When seconds molars retentions are found, they usually present a challenge both for the orthodontist and the surgeon. Unilateral impaction is more common than the bilateral kind, and it is more frequent in the mandible, more frequent in men than in women, and usually on the right side. Second molars are usually found mesially tipped.[11]

Second molars erupt as a result of the remodeling changes of the anterior border of the mandibular ramus after a self-adjustment of their pre-determined mesial tipping. However, lack of space in the arch due to an inadequate mandibular growth, a non-desirable axial inclination or orthodontic mechanics for distalizing first molars may interfere with the self-correction of the mesial inclination resulting in a retention.

CASE REPORT

Male patient, 14 years 8 month of age attends the Orthodontics clinic at the Postgraduate Studies and Research Division of the Faculty of Dentistry, UNAM, with a chief complaint «my parents brought me here and I want straight teeth».

An increased lower facial third is observed in the facial analysis, as well as a convex profile, hypertonic perioral muscles and a facial midline that coincides with the upper dental midline *(Figure 1)*.

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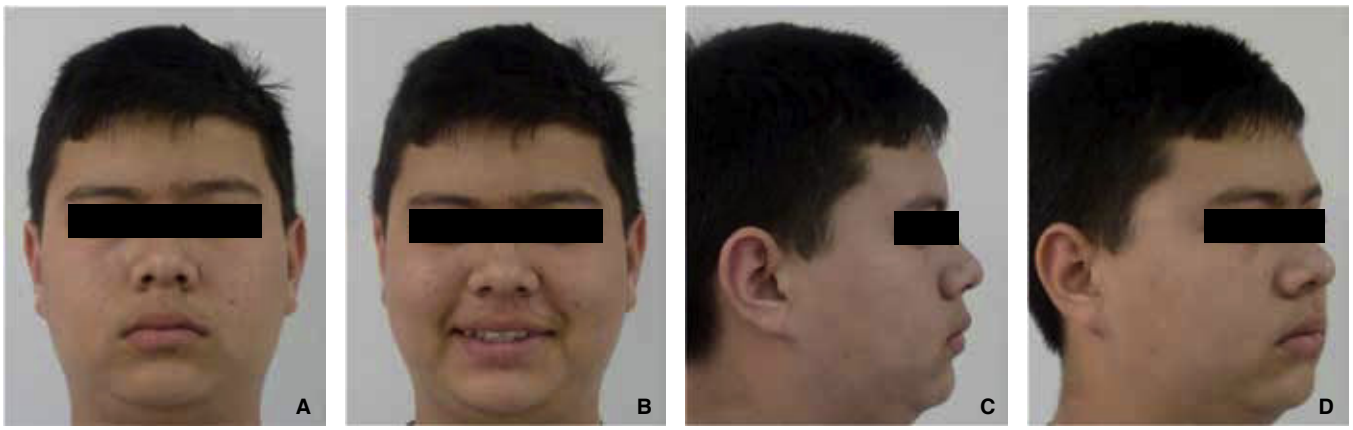

Figure 1. Extraoral photographs: **A)** Frontal view, **B)** Smile frontal view, **C)** Profile, **D)** Three-quarters.

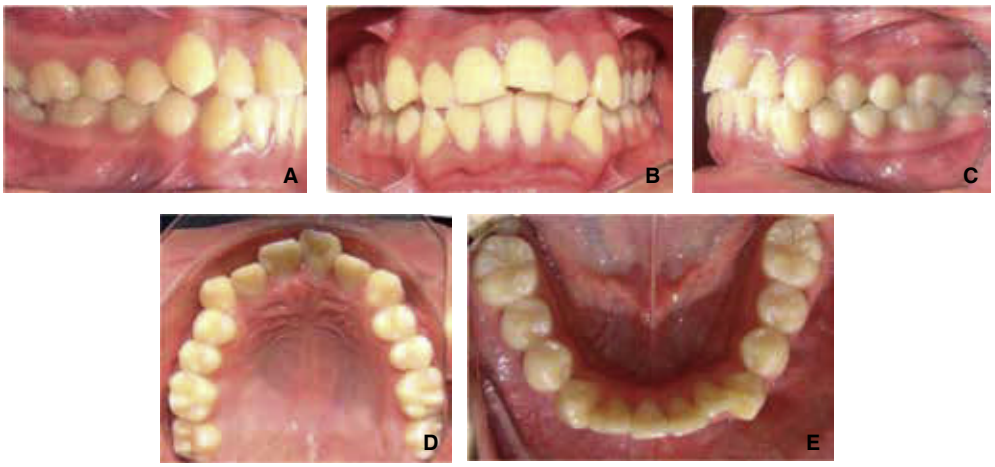

Figure 2.

Intraoral photographs: **A)** Right view, **B)** Frontal view, **C)** Left view, **D)** Upper occlusal view, and **E)** Lower occlusal view.

Figure 3. Initial panoramic radiograph.

Lower dental midline deviated to the left was observed in the intraoral analysis, as well as severe upper and lower anterior crowding, proclined upper left central incisor, upper right lateral incisor edge to edge with the lower canine, overjet 6 mm and overbite 1 mm *(Figure 2)*. Mesial inclination and infraocclusion of the

Figure 4. Initial lateral head film.