



## Orthodontic treatment in an adult patient with inactive periodontal disease

### *Tratamiento ortodóncico en un paciente adulto con enfermedad periodontal inactiva*

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#### ABSTRACT

**Objective:** To present a case report of the orthodontic management of an adult female patient with inactive periodontal disease, skeletal CI II with proclination, protrusion, extrusion and multiple missing teeth. **Methods:** An interdisciplinary treatment plan with periodontics and prosthodontics was determined. MBT 0.022" fixed orthodontic appliances, light forces and contraction archwires were used to correct overerupted teeth, proclination, protrusion and spacing in the upper arch. Stripping was made to reduce interdental black triangles. **Results:** Proclination, protrusion and extrusion decreased. Adequate overjet and overbite were achieved, tooth mobility was reduced and the periodontal condition was improved. **Conclusions:** Orthodontic treatment in adult patients with periodontal disease is limited but it helps achieve better function, aesthetics and integrity of periodontal tissues as well as facilitates the management of future prosthetic rehabilitation.

**Key words:** Orthodontics, adult patient, periodontal disease.

**Palabras clave:** Ortodoncia, paciente adulto, enfermedad periodontal.

#### RESUMEN

**Objetivo:** Presentar el manejo ortodóncico de un paciente femenino adulto con enfermedad periodontal inactiva, CI II esquelética con proinclinación, protrusión, extrusión y múltiples pérdidas dentarias. **Métodos:** Se determinó un plan de tratamiento interdisciplinario con las Especialidades de Periodoncia y Prótesis Bucal e Implantología. La aparatología ortodóncica utilizada fue Roth 0.022", se manejaron fuerzas ligeras, se colocaron arcos de contracción, dobles de intrusión para corregir la extrusión, proinclinación, protrusión y los espaciamentos en la arcada superior. Se realizaron desgastes interproximales para reducir triángulos negros interdentes. **Resultados:** Disminuyó la proinclinación, protrusión y extrusión. Se consiguió mejor sobremordida tanto vertical como horizontal, se redujo la movilidad dentaria y mejoró su condición periodontal. **Conclusiones:** El tratamiento de ortodoncia en pacientes adultos con secuelas de enfermedad periodontal es limitado pero ayuda significativamente a conseguir mejor función, estética, integridad de los tejidos periodontales y facilita el manejo de una futura rehabilitación protésica.

#### INTRODUCTION

Orthodontic treatment is increasingly common in adult patients in whom chronic periodontitis, decreased bony support, tooth mobility or loss as well as attachment loss may appear more frequently than in younger patients.<sup>1,2</sup> This is why the collaboration of specialists of different dental areas should be taken into consideration when performing a multidisciplinary treatment plan for the management of these cases.

It is of outmost importance that before orthodontic treatment begins, active inflammation of the supporting tissues is eliminated and maintained inactive during and after orthodontic treatment.<sup>3</sup>

Studies show that orthodontic treatment is not a contradiction in the treatment of severe adult periodontitis in fact orthodontics improves the possibilities of saving and restoring a deteriorated dentition in many cases.<sup>4</sup>

#### Objective

To show the orthodontic management of an adult female patient with inactive periodontal disease, skeletal Class II with proclination, protrusion, extrusion and multiple extracted teeth.

#### METHODS

A 54 year-old female patient attended the Orthodontics Clinic of the Postgraduate Studies

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and Research Division of the Faculty of Dentistry of the National Autonomous University of Mexico. She was referred from the Periodontics Clinic where conventional treatment for chronic periodontitis was performed. Periodontal treatment included root scaling and planning and plaque control. The patient attended the Orthodontic clinic with inactive periodontal disease and with the aim of improving her teeth's position.

Facial photographs analysis revealed a convex profile, upper and lower lip protrusion, decreased nasiolabial angle, narrow buccal corridors, upper and lower incisor extrusion (*Figure 1*).

Her dental photographs and radiographs show upper and lower incisor proclination and protrusion, spacing, increased overbite and overjet, canted occlusal plane, loss of multiple teeth, telescopic bite of the upper left second premolar and extrusion of upper and lower teeth (*Figures 2 to 4*)

With the results obtained from the measurements of Jarabak, Downs, McNamara, Steiner, Ricketts and UNAM cephalometric analysis, the following cephalometric diagnosis was determined: skeletal class II due to maxillary protrusion and mandibular retrusion with upper and lower dental proclination and protrusion and vertical growth (*Table I*).

#### Treatment objectives

Treatment objectives were aimed at improving the patient's periodontal health, stability, function and esthetics. Among these objectives were the following: to maintain periodontal disease inactive, to improve the patient's soft tissue profile, to reduce upper and lower protrusion and proclination, intrude upper anterior teeth, close spaces, to improve the overbite and overjet and correct dental rotations.



**Figure 1.**

Initial facial photographs.



**Figure 2.** Initial intraoral photographs.

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