

**PREMIO GIORGIO VOGEL 2023**  
***GIORGIO VOGEL AWARD 2023***



**MULTIDISCIPLINARY PERIODONTAL -  
ORTHODONTIC - RESTORATIVE TREATMENT  
OF A STAGE IV GRADE C PERIODONTITIS CASE**

Javier Calatrava

*Universidad Complutense de Madrid, Madrid, Spain*

**Clinical evaluation/ Diagnosis**

A 54 year old, systemically healthy male patient that smoked around 1 pack of cigarettes per day came our service with the chief complaint that he had never gone to the dentist and he did not want to keep losing teeth. In the clinical and periodontal exam, there was generalized presence of biofilm and calculus, as well as evident signs of loss of attachment, with generalized probing pocket depths of 6-9 mm, associated with gingival recessions, tooth mobility degree I-II and furcation involvement degree 1-2 in all of the molars. The patient was diagnosed with stage IV grade C periodontitis as well as secondary occlusal trauma.

**Treatment goals**

The main overall treatment goals were to achieve periodontal health, attempting to reach the outcomes of periodontal therapy proposed in the EFP guidelines for Stage IV Periodontitis patients, as well as restoring function and esthetics while preserving as many teeth as possible. To achieve these goals, being a Stage IV Grade C periodontitis case, a complex multidisciplinary treatment was carried out in a step wise manner according to the EFP guideline for treatment of Stage IV Periodontitis patients (Herrera et al. 2021)

## **Description of clinical/surgical procedures**

Steps 1 and 2 consisted of subgingival instrumentation, combined with restorative treatment of carious lesions and a smoking cessation. During Step 3, resective surgeries by means of apically positioned flaps were performed in the first, third, fourth and sixth sextant; and periodontal regeneration with a M-MIST technique combined with enamel matrix derivatives and a bone substitute to treat an intrabony defect in the mesial aspect of 1.3. After the endpoints of therapy had been met and 4 weeks after periodontal regeneration (Jepsen et al. 2021), orthodontic therapy was carried out to obtain proper occlusion and improve aesthetics. Within the last stages of orthodontic therapy, implants were placed in 35 and 37, as well as 32 and 42 combined with horizontal bone regeneration, and restored with implant supported fixed partial prosthesis. Lastly, embrasure space closure and composite veneers were performed to improve aesthetics in the second sextant.

## **Clinical outcomes**

By means of a comprehensive and multidisciplinary periodontal and orthodontic treatment, restorative and implant dentistry; we were able to restore health, function and esthetics while maintaining mostly all of the patient's natural dentition with an initial questionable prognosis. In the final periodontal exam a stable but reduced peridontium can be observed with all sites meeting the endpoints of periodontal therapy, and the radiographic exam shows stability of the alveolar bone crest and peri-implant bone levels. After completing the treatment, patient entered a supportive periodontal care program with recall visits every 3 months, and at a 1 year follow up patient still shows clinical and radiographic evaluation compatible with periodontal health, and is very satisfied with outcome of therapy. It can be concluded that a comprehensive periodontal, orthodontic and restorative and multidisciplinary treatment is necessary for treating complex Periodontitis Stage IV Grade C patients.