

SCIENTIFIC PAPERS

FULL-ARCH REHABILITATION  
OF EDENTULOUS ATROPHIC MAXILLA  
WITH IMMEDIATE  
LOADING V-II-V TECHNIQUE:  
A CASE REPORT.

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# FULL-ARCH REHABILITATION OF EDENTULOUS ATROPHIC MAXILLA WITH IMMEDIATE LOADING V-II-V TECHNIQUE: A CASE REPORT.

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## INTRODUCTION

Implant placement in the posterior maxilla is often challenging because of the poor quality and quantity of residual jawbone, especially in patients with long term edentulism. Several clinical studies have reported that tilting of implants may represent one of the best possible therapeutic alternatives for the rehabilitation of edentulous jaws. The aim of this case report is to show results of V-II-V technique for immediate rehabilitation of edentulous maxilla.

## CASE PRESENTATION

A 62-year-old female patient was referred to authors in order to restore the maxilla with a fixed full-arch implant-prosthetic rehabilitation. Clinical and radiographic examinations were accomplished to determine periodontal status of residual teeth and available bone volume of maxilla: severe vertical defects of anterior teeth, absence of posterior teeth, alveolar posterior atrophy due to maxillary sinus expansion were observed. Since teeth were deemed hopeless and referred for extraction, the authors had to choose a treatment planning based on 6 immediately-loaded implants inserted according to V-II-V technique and a screw-retained full-arch prosthesis. Under local anesthesia, all maxillary teeth were extracted. A crestal incision was performed starting from the pterygomaxillary region and a full thickness buccal flap was raised exposing the vestibular bony wall so as to identify anterior and posterior walls of the maxillary sinus. Using a standard surgical guide the patient received 6 implants: the 2 most distal implants were firstly placed, engaging the posterior wall of the maxillary sinus with an angulation of about 30-45° relative to alveolar ridge; the two medial tilted implants were placed engaging the anterior sinus wall; finally, two implants were inserted axially in the lateral incisors position. Moreover, autogenous bone graft was placed in post-extraction sockets to fill peri-implant defects and to stimulate socket healing. After implant surgery, angulated multi-unit abutments were connected on 4 tilted implants; while standard abutments were connected to the 2 axial implants. Finally, an impression was taken by using a custom-made tray and plaster cast. Within 48 hours an acrylic resin temporary prosthesis was delivered and screwed on abutments, achieving an immediate loading rehabilitation. 12 months after implant surgery, composite resin definitive prosthesis was realized by means of the CAD-CAM Procera® system and it was delivered to patient.

## RESULTS

The healing period was uneventful. Clinical and radiographical examination showed a complete bone healing of peri-implant and extraction sites. All implants achieved osseointegration 3 months after immediate loading. One year later, clinical examination showed soft tissue contours with no significant changes and radiographic examination revealed stable bone levels around implant. No complications were observed during follow-up.

## DISCUSSION AND CONCLUSION

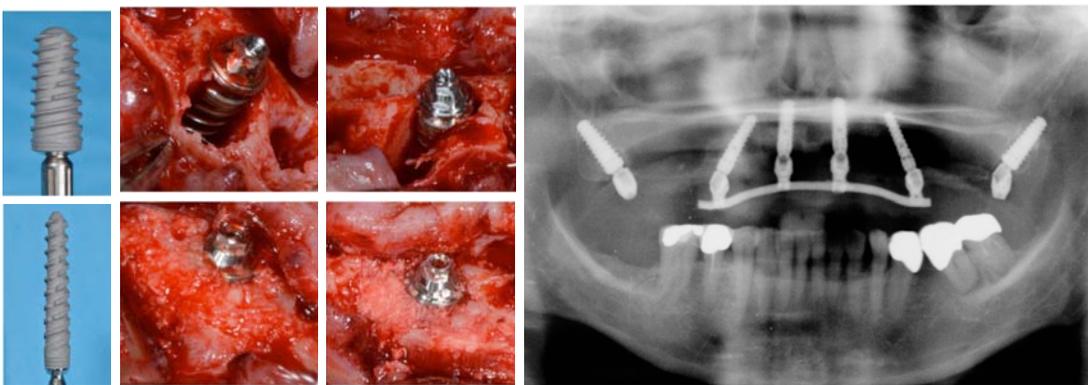
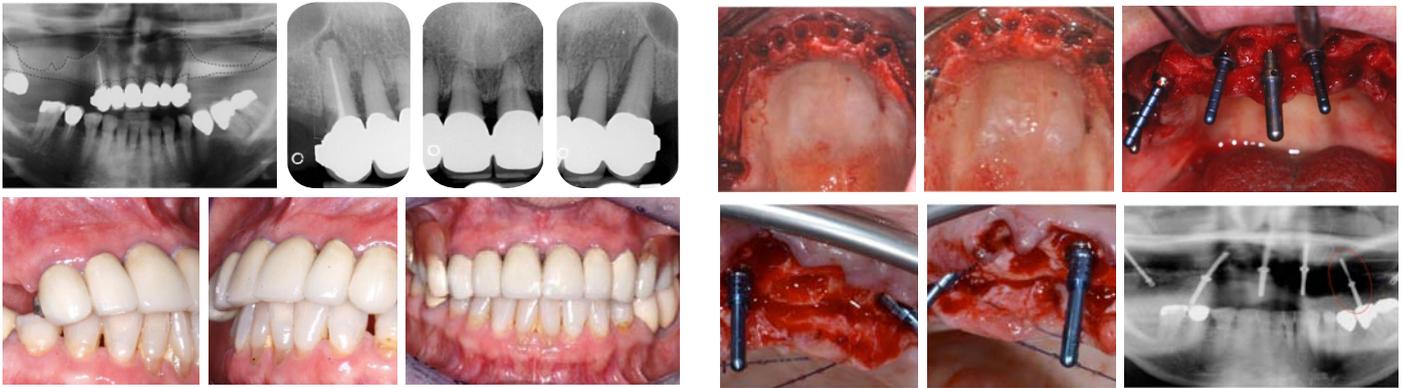
The V-II-V technique offers many important advantages: maxillary sinus augmentation with bone grafts can be avoided; overall treatment time can be reduced; and immediate loading can be performed because the implants, engaging the anterior and posterior sinus wall, achieve a high primary stability. This technique can be considered a viable treatment for an immediate implant-supported rehabilitation of the atrophic maxilla, avoiding bone grafts.

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