064

Four-Implant Maxillary Overdenture Fully Supported By CAD/CAM Titanium Bar: A 24-Months Follow up Case.

Dr.Sinem Yeniyol, Dt.Caner Yılmaz, Prof.Dr.Selim Ersanlı
Istanbul University Faculty of Dentistry Oral Implantology Department

Abstract

Oral rehabilitation with overdenture on implants of upper jaw must be taken into consideration a variety of anatomical and biomechanical issues. The aim of this case report was to assess the survival of implants, survival of maxillary overdenture and the condition of surrounding hard and soft tissues after a mean observation period of at least 2 years.

The present study involved a patient rehabilitated with 4 implants (Camlog Biotechnologies, Basel, Switzerland) solidarized with a titanium bar crafted with CAD/CAM technology for maxillary comfort, precision and structural lightness.

The follow-up was 24 months, with an implant survival of 100%. Based on our clinical evidence, bars engineered with CAD/CAM technology are promising in terms of precesion and comfort despite higher costs. A 4-implant overdenture supported by CAD/CAM titanium bar may be a reliable option for the treatment of the edentulous maxilla over a 2-years period.

Background and Aim

While most implant-based treatment has historically focused on fixed prosthetic tooth replacement, the multitude of benefits to the edentulous population from implant overdentures is overwhelming in improved function, emotional stability, physical health, and esthetics. Although there still remains a lack of consistency in techniques, prosthetic design, and attachment systems, these aspects have been proven less important to successful outcomes than once thought[1,2,3].
On implant-retained maxillary overdentures, consensus or a treatment concept is lacking although maxillary overdentures can be considered a favorable treatment in cases of insufficient bone volume and complaints about retention and stability of the full denture[2,4].
The aim of this case report of implant-supported maxillary overdenture was to assess the survival of implants, survival of maxillary overdentures and the condition of surrounding hard and soft tissues after a mean observation period of at least 2 year.

Methods and Materials

A 45 year male patient applied to our clinic with mobility in teeth, poor aesthetic prosthetics and mouth odor of his teeth. In radiographic and clinical examinations; the patients was observed to chronic periodontal disease. T3 months after teeth extraction, patient ‘s maxilla were rehabilitated with 4 implants (Camlog Biotechnologies, Basel, Switzerland). The prosthetic rehabilitation was solidarized with a titanium bar milled with CAD/CAM technology for maxillary comfort, precision and structural lightness.

Results

The follow-up was 24 months, with an implant survival rates of 100%. Based on our clinical evidence, bars engineered with CAD/CAM technology were found promising in terms of precision and comfort despite higher costs. A 4-implant overdenture supported by CAD/CAM titanium bar may be a reliable option for the treatment of the edentulous maxilla over a 2-years period.

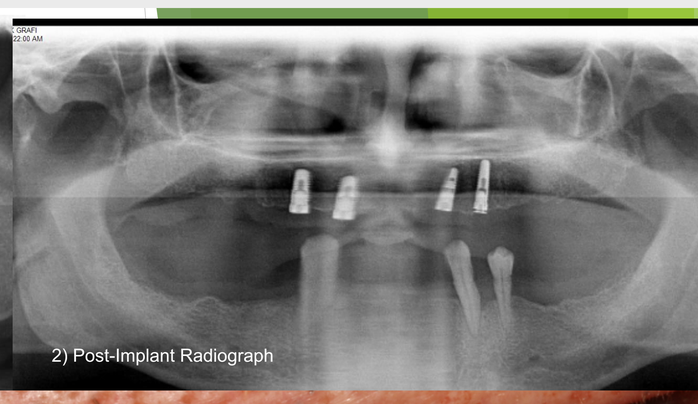
Conclusion

Fixed implant-supported prosthesis treatment option is a remarkable advancement in prosthodontics. It is one of the dentistry’s most satisfying treatment modalities but it demands considerable skill, judgment and enough experience. Consequently, this treatment provides a high degree of patient commitment and understanding. The treatment provided to the patient resulted in accurately passive fitting, esthetic and functionally efficient prosthesis.

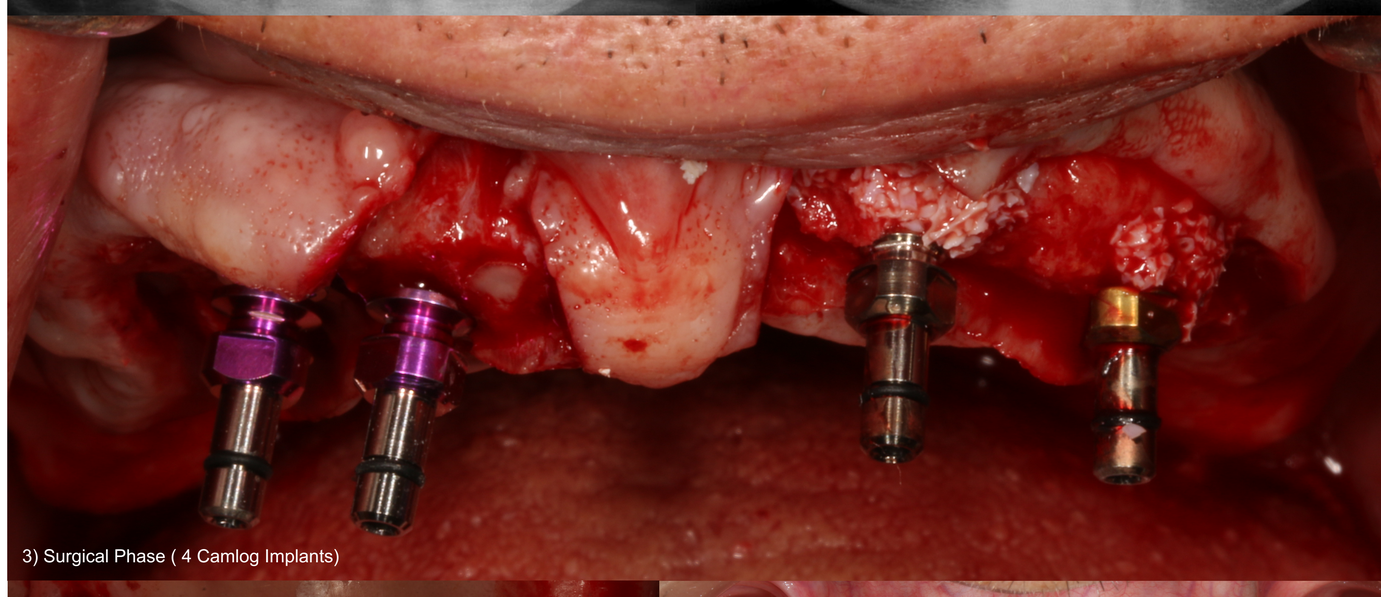
References

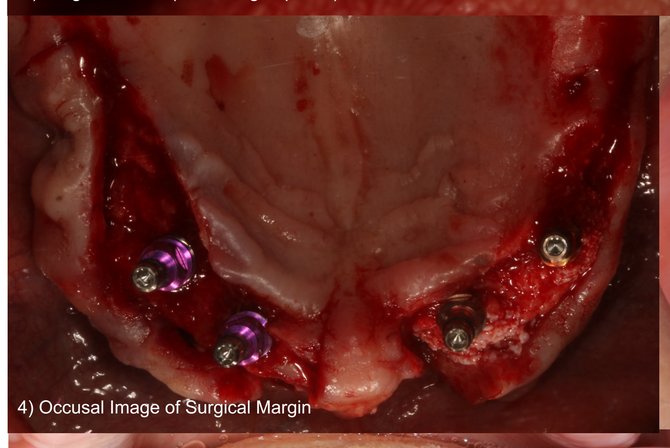
1) Payne, A. G. T., Tawse-Smith, A., Thomson, W. M., Duncan, W. D., Kumara, R. (2004) One-stage surgery and early loading of three implants for maxillary overdentures: a 1-year report. Clinical Implant Dentistry and Related Research.
2) Cannizzaro, G., Leone, M. & Esposito, M. (2007) Immediate functional loading of implants placed with flapless surgery in the edentulous maxilla: 1-year follow-up of a single cohort study. The International Jour- nal of Oral and Maxillofacial Implants.
3) Flanagan, D. (2008) Screwless fixed detachable partial overdenture treatment for atrophic partial edentulism of the anterior maxilla. Journal of Oral Implantology
4) Shetty PP (2016) Hidden Overdenture Bar in Fixed Implant-retained Hybrid Prosthesis: Report of a Novel Technique. J Contemp Dent Pract.


1) First Panaromic Radiograph

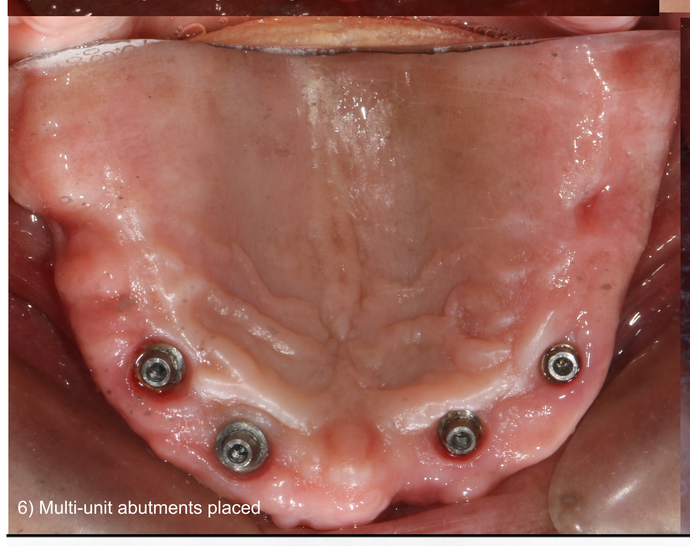


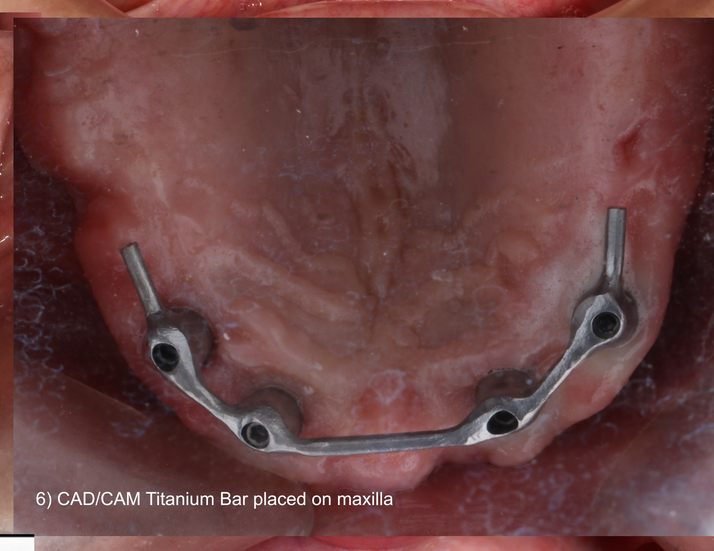
2) Post-Implant Radiograph

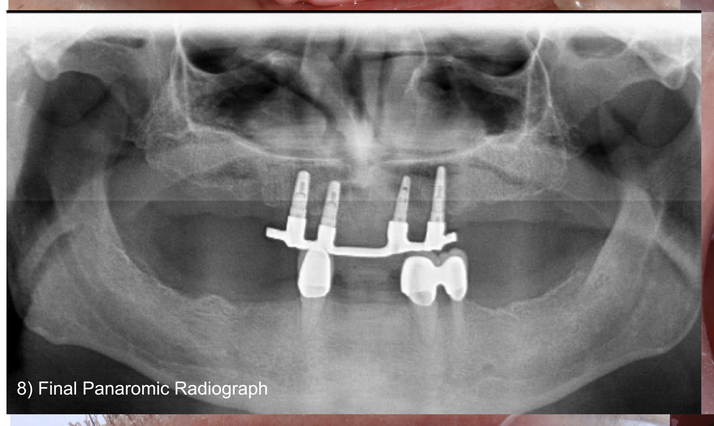

3) Surgical Phase (4 Camlog Implants)


4) Occusal Image of Surgical Margin


5) Gingiva Former after 3 months


6) Multi-unit abutments placed


6) CAD/CAM Titanium Bar placed on maxilla


8) Final Panaromic Radiograph


9) Frontal view of the CAD/CAM Titanium Bar


9) Occusal Image of maxilla


10) Occusal Image of mandibula


9) Final Prosthetic Restoration


9) The patient experienced a return to comfort and confidence that also resulted in an improved quality of life ☺

ORAL RECONSTRUCTION FOUNDATION