CLINICAL ORAL IMPLANTS RESEARCH

PPR-464 Implant Therapy Outcomes, Prosthetic Aspects

Fixed removable CAD/CAM implant bar overdenture in mandible/maxilla on 4 implants: preliminary results

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Background: An implant-supported fixed removable denture offers considerable functional and esthetic advantages over the traditional removable denture. Over time, the majority of people who have experienced tooth loss develop chewing disabilities with conventional dentures. This is often because it is difficult to obtain stability and retention with tissue-supported dentures. The Implant Bar Overdenture concept offers a solution to provide long-term functional stability.

Aim/Hypothesis: To assess implant and prosthesis survival as well as patient quality of life rehabilitated with CAD/CAM Implant Bar Overdenture in mandible/maxilla on 4 implants after 1 year.

Material and Methods: In this prospective study, edentulous patients were treated with an individualized CAD/CAM implant-supported fixed-removable titanium bars. Implants (NobelReplace CC, Nobel Biocare) were placed in healed or recently healed extraction sites (8 weeks healing period prior to implant insertion) and were subjected to early or delayed loading. Provisional restorations were soft tissue-based overdentures not connected to the implants and free from pressure spots. The final bar overdenture (NobelProcera, Nobel Biocare) was provided at least 3 months after implant placement. Follow-up visits took place at 1 month, 6 months and 1 year after implantation. Patient assessment of esthetics and function was performed using the OHIP-21 questionnaire administered at pre-treatment, delivery of permanent prosthesis, and at 6 and 12 months post-implantation. In addition, patients rated their satisfaction with the treatment on a scale of 1–10, where 10 = fully satisfied, 5 = satisfied and 1 = not satisfied.

Results: Six centers treated 73 patients with implant bar overdentures on 292 implants. 55% (n = 160) of implants were placed in the maxilla and 45% (n = 132) in the mandible. The 1-year follow-up visit was attended by 45 patients with 178 implants (2 implants were lost) placed in the maxilla (62%, n = 110) and the mandible (38%, n = 68). At 1 year, the implant cumulative survival rate (CSR) was 98.84% and the cumulative survival rate of the prosthesis was 100% for both the maxilla and mandible. The OHIP-21 questionnaire results showed an improvement for all patients independent of the treated jaw. Patient satisfaction at 1 year was high: 82.1% of the maxillary patients and 80% of the mandibular patients stated they would have chosen the same solution.

Conclusions and Clinical Implications: The fixed-removable Implant Bar Overdenture in mandible or maxilla on 4 implants shows good implant and prosthesis survival rates and demonstrates low discomfort and high patient satisfaction at 1 year post-implantation.

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