



WESTSIDEOMS ORAL SURGERY & DENTAL IMPLANT CENTER

Rupi Dhadli, DDS, MD

6125 NE Cornell Road, Suite 320 • Hillsboro, OR 97124

Tel: (503) 547-8879 • Fax: (503) 547-8538

www.westsideoms.com

Fall 2017 ~ A Quarterly Update

Dear Colleague:

Each year we continue to see growth and development in our practice accompanied by an increase in treatment success. Through this quarterly newsletter, we wish to share with you some of the latest developments in oral surgery and implant dentistry, as well as open communication with your office.

If we can provide any additional information, or if you would like to see an article on a particular topic in our next issue, please do not hesitate to call. We appreciate the trust you place in us by allowing us to participate in the care of your patients.

Regards,

Dr. Rupi Dhadli

The All-on-Four Treatment Concept: Systematic Review

Soto-Penalzoza D, et al.
J Clin Exp Dent. 2017 Mar 1;9(3)

The purpose of this study was to systematically review the literature on the "all-on-four" treatment concept regarding its indications, surgical procedures, prosthetic protocols and technical and biological complications after at least three years in function. The three major electronic databases were screened: MEDLINE (via PubMed), EMBASE, and the Cochrane Library of the Cochrane Collaboration (CENTRAL).

A total of 728 articles were obtained from the initial screening process. Of these articles, 24 fulfilled the inclusion criteria. Methodological quality assessment showed sample size calculation to be reported by only one study, and follow-up did not include a large number of participants - a fact that may introduce bias and lead to misleading interpretations of the study results. *The all-on-four treatment concept offers a predictable way to treat the atrophic jaw in patients that do not prefer regenerative procedures, which increase morbidity and the treatment fees.* The results obtained indicate a survival

rate for more than 24 months of 99.8%. Biological complications (e.g., peri-implantitis) are reported in few patients after a mean follow-up of two years. Adequate definition of the success / survival criteria is thus necessary, due the high prevalence of peri-implant diseases.

Immediate Loading Short Implants Inserted on Low Bone Quantity for the Rehabilitation of the Edentulous Maxilla Using an All-on-4 Design

Maló P, de Araújo Nobre MA, et al.
J Oral Rehabil. 2016 Aug;42(8):615-23

The purpose of this study was to evaluate the use of short-length tapered implants in immediate loading for complete edentulous maxillae rehabilitations using an All-on-4 design. This retrospective clinical study included a cohort of 43 patients with 172 implants (74 short-length implants) inserted in low bone quantity. The patients were followed between 4 months and 6 years (average = 3 years). Outcome measures were implant survival, marginal bone remodeling, biological and mechanical complications.

Two patients with four short-length implants were lost to follow-up during the first year. Three short and three long implants failed in four patients, rendering an overall cumulative survival rate implant and patient level, respectively, of 95.7% and 95.1% for

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Dr. Dhadli is dual degreed Oral and Maxillofacial Surgeons both a physician and dental surgeon. Dr. Dhadli attended Dental School and Medical School at Case Western Reserve University. She furthered her training and education through a 5 year intensive residency program in Oral and Maxillofacial Surgery and Anesthesia at University Hospitals of Cleveland, OH, Mt. Sinai Medical Center, Rainbow Babies and Children Hospital, and Metrohealth Medical Center in Cleveland, OH.



Rupi Dhadli, DDS, MD

Immediate Loading...continued

short implants, 100% for regular implants and 96.6% and 95.2% for long implants. The average marginal bone remodelling at 1 and 3 years was 0.97 and 1.25 mm for the short implants, 0.82 and 0.87 mm for regular implants and 0.87 and 0.98 mm for long implants. Three patients presented 4 short-length implants with peri-implant pockets (3 implants in 2 patients were pseudo-pockets). Mechanical complications were registered in 13 patients (7 provisional prostheses fractures and 6 abutment screw loosening). All complications were treated successfully. *The authors concluded that the short-term outcome of fixed prosthetic complete edentulous maxillae rehabilitations supported by short-length implants inserted in low bone quantity areas is viable. Long-term clinical studies are necessary for evaluating the outcome of these implants.*

Retention and Stability of Implant-Retained Mandibular Overdentures Using Different Types of Resilient Attachments

Lsyad MA, Agha NN, et al.
Int J Oral Maxillofac Implants. 2016 Sep-Oct;31(5):1040-8

The authors in this study wanted to evaluate and compare the retention and stability of mandibular implant overdentures using different types of resilient attachments. Two implant analogs were inserted in the canine areas of an acrylic edentulous mandibular model. A metal-reinforced experimental overdenture was constructed and connected to the implant analogs (on two occasions) using either resilient telescopic or Locator attachments. Locators were divided into three subgroups according to the degree of retention of the male nylon insert: Locator extra-light retention (blue insert), Locator light retention (pink insert), and Locator medium retention (transparent insert). Vertical and oblique (anterior, posterior, and lateral) dislodging forces were measured at the beginning of the study (initial retention) and after 540 cycles of denture insertion and removal (final retention).

For all dislodging forces, Locator medium recorded the highest initial and final retention. Telescopic attachments recorded the lowest retention during vertical and anterior dislodging, and Locator extra-light recorded the lowest retention during lateral and posterior dislodging. For all types of Locator attachments, anterior dislodging recorded the highest initial and final retention, and lateral dislodging recorded the lowest retention. For the telescopic attachment, posterior dislodgment recorded the highest initial and final retention, and anterior dislodging recorded the lowest retention. *After repeated denture insertions*

and removals, the highest retention and stability were recorded with Locator medium followed by Locator light. The lowest retention was recorded with resilient telescopic attachment, and the lowest stability was recorded with Locator extra-light.

Immediate Versus Delayed Loading of Implant for Replacement of Missing Mandibular First Molar: A Randomized Prospective Six Years Clinical Study

Chidagam P., Gande V., et al.
J Clin Diagn Res. 2017 Apr;11(4)

Emergence of dental implants made the replacement of missing tooth easy. During the early days of introduction, implants were loaded three to six months after implant insertion, but understanding of healing cascade and improved production technology has changed the phase of restoration from delayed to immediate loading. The purpose of this study was to evaluate and compare the clinical outcome of immediate and delayed loaded implant supported prosthesis for missing mandibular first molar. The objectives were bleeding on probing, probing depth, implant mobility, marginal bone level and peri-implant radiolucency were evaluated during follow up period. Twenty patients were included in this study that were in the need of fixed implant supported prosthesis for missing mandibular first molar. Single tooth implant with immediate loading done within two days of implant insertion in one group and another group were loaded after three months of implant insertion. These groups were evaluated clinically and radiographically over a period of 72 months after loading using appropriate statistical analysis.

The study consisted of 14 male and six female patients with the age range of 19 to 31 years. There was no bleeding on probing and probing depth remained well within the normal range even after 72 months of loading among both the groups. Minimal marginal bone loss was observed with no mobility; peri-implant radiolucency supported prosthesis for missing mandibular first molar with immediate loading can be used as a successful treatment modality. It reduces treatment time, provides early function and prevents undue migration of adjacent tooth. *Immediate loading showed similar clinical and radiographic results as those of delayed loading, indicating it as an equally efficient technique for implant supported prosthesis.*



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