



WESTSIDEOMS ORAL SURGERY & DENTAL IMPLANT CENTER

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Fall 2016 ~ A Quarterly Update

Dear Colleague:

As the year end comes quickly upon us, we would like to extend many thanks to all of you for your trust and confidence throughout the year. It is greatly appreciated and we wish all of you a very happy and healthy holiday season.

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

Risk Assessment and Sensitivity Meta-analysis of Alveolar Osteitis Occurrence in Oral Contraceptive Users

Bienek DR, Filliben JJ
J Am Dent Assoc. 2016 Jun;147(6):394-404

In this study, the authors conducted an alveolar osteitis (AO) risk assessment and global sensitivity meta-analysis within populations using oral contraceptives (OCs). Sex, smoking, and timing within the menstrual cycle were considered as factors. Eligibility criteria for inclusion of a study in the meta-analysis were experimental or medical record survey data evaluating AO and OC use, ability to draw pairwise comparisons for factors of interest, and description of the number of AO events relative to the number of participants in the respective group.

The risk ratio of AO in females not using OCs was 1.2 greater than that in males. Among females, OC use significantly increased the average risk of AO occurrence

by nearly 2-fold (13.9% versus 7.5%). There was no statistical evidence of lower risk in females menstruating at the time of exodontia. *In 85.7% of the studies, smokers had an overall higher rate of AO than did nonsmokers. To mitigate the increased risk of AO occurrence in females, the dentist should be cognizant of patients using OCs and smoking tobacco.*

Survival of Dental Implants Placed in Grafted and Nongrafted Bone

Tran DT, Gay IC, et al.
Int J Oral Maxillofac Implants. 2016 Mar-Apr;31(2):310-7

The purpose of this study was to compare dental implant survival rates when placed in native bone and grafted sites. Additionally, risk factors associated with dental implant loss were identified. This study was based on the hypothesis that bone grafting has no effect on implant survival rates. A retrospective chart review was conducted for patients receiving dental implants at the University of Texas, School of Dentistry from 1985 to 2012. Exclusion criteria included patients with genetic diseases, radiation and chemotherapy, or an age less than 18 years. To avoid misclassification bias, implants were excluded if bone grafts were only done at the same time of

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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.



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Survival of Dental Implants ...continued

placement. Data on age, sex, tobacco use, diabetes, osteoporosis, anatomical location of the implant, implant length and width, bone graft, and professional maintenance were collected for analysis.

A total of 1,222 patients with 2,729 implants were included. The cumulative survival rates at 5 and 10 years were 92% and 87% for implants placed in native bone and 90% and 79% for implants placed in grafted bone, respectively. *Appropriate statistical analysis indicated no significant difference in survival between the two groups; having maintenance therapy after implant placement reduced the failure rate by 80%, and using tobacco increased the failure rate by 2.6-fold. There was no difference in the dental implant survival rate when implants were placed in native bone or bone-grafted sites. Smoking and lack of professional maintenance were significantly related to increased implant loss.*

Feasibility of Dental Implant Replacement in Failed Sites: A Systematic Review

Zhou W, Wang F, et al.
Int J Oral Maxillofac Implants 2016 May-Jun;31(3):535-45

The purpose of this study was to assess the clinical outcomes of replaced implants after removal of failed ones. In addition, associated risk factors that might affect the final outcome of these procedures were also explored. An electronic literature search was conducted by two reviewers in several databases for articles written in English up to November 2014. Human clinical trials with a minimum of 10 subjects enrolled that reported clinical outcomes with a mean follow-up period of at least 12 months after implant replacement were included. Implant survival and non-modifiable/modifiable factors at second and third implant placement attempts were studied. Hence, the PICO question that was aimed to be addressed was: Do patients undergoing implant replacement (second and third attempts) in previous failed sites have comparable clinical outcomes by means of implant survival/failure rate to implants placed at the first attempt?

Five retrospective clinical cohort studies and two case series satisfied the selection criteria and thus were included in this review. In total, 396 patients were studied due to implant replacement in previous failed sites. The survival rate for implant replacement at the second attempt was 89% with a mean

follow-up of 41.59 months. Thirty-one implants were replaced for a third attempt with a mean survival rate of 74.19% at the follow-up of 29.66 months. Major risk indicators were generally divided into patient-related factors (health status, smoking habits, and oral hygiene maintenance), implant characteristics (dimensions, coating, and loading), and site characteristics (bone quality and density, vertical and horizontal dimensions, soft tissue around the implant). *Implant replacement is a reasonably feasible option for scenarios of early and late implant failure. However, modifiable risk factors must be controlled before proceeding for implant replacement.*

Is a High Level of Total Cholesterol a Risk Factor for Dental Implants or Bone Grafting Failure?

Tirone F, Salzano S, et al.
Eur J Oral Implantol. 2016 Spring;9(1):77-84.

This study attempts to verify the effect of hypercholesterolaemia on implant and bone augmentation failures. A retrospective cohort study was conducted on 268 sequential patients scheduled for implant and bone augmentation surgery under conscious sedation in a private practice. Total serum cholesterol (TC) levels were assessed via blood tests before surgery. Patients were divided into two groups: TC < 200 mg/dl and TC > 200 mg/dl. A 6-month post-loading follow-up was scheduled both for implants and grafts. The outcomes considered were implant failure (removal) and graft infection/failure. The effect of cholesterol on early implant and grafting failure was investigated according to appropriate statistical analysis.

Two hundred and twenty-seven patients fulfilled inclusion criteria; 139 had hypercholesterolemia. The 6-month post-loading overall implant failure rate was 6.25% at patient level (2.00% at implant level). Partial or total graft infection rate was 10.2%. *High TC increased by 7.48 times the odds of the grafting failure, while it did not modify the odds of implant failure. High total serum cholesterol levels tend to increase graft failure rates whilst it did not influence implant failures.*



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