

ORAL SURGERY CARE



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Happy Spring!

Greetings to spring and a shift towards a less chaotic environment. COVID vaccines are available not just for health care workers but increasingly so for the general public, which includes our loved ones and all those we care about. While we continue to be careful, light is beginning to show at the end of the COVID tunnel.

Enjoy these journal reviews from recent oral surgery and implant literature. If any of the articles especially interest you, I would welcome the chance to discuss it with you.

Thank you for trusting us with the care of your patients. We take this trust seriously, and fully realize that we serve as an extension of your office. Your patients are like your extended family, and we treat them as such. As always, feel free to call or email whenever I can be of any help.

Best Regards,

Dr. Brent Florine



Oral Surgery Care

Impact of Hyperglycemia on the Rate of Implant Failure and Peri-implant Parameters in Patients with Type 2 Diabetes Mellitus

Ren Shang, Limin Gao
J Am Dent Assoc 2021 Mar;152(3):189-201

The impact of hyperglycemia on dental implant therapy remains unclear. In this systematic review, the authors compared the rates of implant failure and peri-implant bleeding on probing (BOP), probing depth (PD), and peri-implant bone loss (PIBL) among patients with type 2 diabetes mellitus and nondiabetic patients. The authors performed subgroup analyses based on glycemic level to evaluate whether patients with higher glycemic levels were more prone to peri-implant inflammation. The authors searched 4 databases for original clinical studies. Studies in which the researchers provided information on the rate of implant failure or peri-implant parameters were included.

Nine clinical studies were identified on the basis of the inclusion criteria. No significant differences were found in

rates of implant failure between diabetic and nondiabetic patients. Significant differences in BOP and PIBL, favoring nondiabetic patients, were observed. Results of subgroup analyses indicated that the increase in glycemic level did not significantly influence BOP, PD, and PIBL values among diabetic patients. *Patients with type 2 diabetes mellitus seem to be able to achieve a rate of implant survival similar to that of healthy patients. Regarding peri-implant parameters, BOP and PIBL were higher in patients with type 2 diabetes mellitus, indicating that hyperglycemia is an important risk factor for peri-implant inflammation. No association was found between peri-implant parameters and glycemic level among patients with type 2 diabetes mellitus, providing oral hygiene was strictly maintained.*

Evaluation of Risk Factors for External Root Resorption and Dental Caries of Second Molars Associated With Impacted Third Molars

Serap Keskin Tunc, Alaettin Koc
J Oral Maxillofac Surg 2020 Sep;78(9):1467-1477

Impacted third molars (M3s) may lead to external root resorption (ERR) and dental caries (DC) in the adjacent second molars (M2s). The purpose of this study was to identify the risk factors for ERR and DC in M2s associated

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Dr. Brent Florine received his undergrad degree from the University of Minnesota College of Liberal Arts and attended the University of Minnesota School of Dentistry. He received postgraduate dental and oral and maxillofacial surgery training at Louisiana State University and Charity Hospital in New Orleans, and the University of Minnesota Hospitals and Clinics. He is certified as a Diplomate of the American Board of Oral and Maxillofacial Surgery and has practiced oral surgery in Eagan since 1987.



Risk Factors ...continued

with impacted M3s. The authors implemented a cross-sectional study and enrolled a sample composed of patients with M3s and M2s present and cone-beam computed tomography (CBCT) scans available for review. If there was contact between the M2 and the adjacent M3 and the border of radiolucency was more distinct, the case was considered ERR. Apart from that, the case was considered DC. Potential predictor variables were defined as age, gender, tooth location, M2-M3 contact, root development in M3, M3 inclination, M3 impaction type, and M3 follicular diameter. Outcomes of the study were DC and ERR in M2s. CBCT was used to detect the presence of DC and ERR in M2s.

A total of 250 eligible images of M3s in the upper and lower jaws of 167 patients were included. The mean age of the patients with CBCT images available was 26.08 (range, 18 to 40), and 43.6% of the patients were men. Factors associated with a significantly increased frequency of ERR in M2s included maxillary location, presence of M2-M3 contact, and mesioangular inclination. DC in M2s was significantly more likely to occur in those with absence of contact between M2 and M3. *The results of this study showed an increased risk of ERR to be associated with maxillary molars, mesioangular inclination, and presence of M2-M3 contact. The variable associated with an increased risk of DC was the absence of M2-M3 contact.*

Are Nongrafting Solutions Viable for Dental Implant Treatment in Limited Bone Volume?

Lyndon F Cooper, Ghadeer Thalji, et al.
Compend Contin Educ Dent Jul/Aug 2020;41(7):368-376

Dental implant therapies must be planned and executed to meet both the immediate and longer-term expectations of patients. The early developmental success of dental implants was dependent on the quality and quantity of a patient's bone. Implants were commonly placed into the parasymphiseal mandibular and anterior maxillary bone. Building on this success, bone grafting allowed patients lacking sufficient bone to obtain implant-supported prosthetic solutions for treatment of partial or complete edentulism. More recently, several nongrafting solutions for implant therapy, including pterygoid implants, zygomatic implants, tilted implants, and short implants, have reported success.

This article considers the rationale for graftless solutions in implant therapy as well as the data supporting the use of

various graftless protocols as alternatives to grafting and conventional dental implant therapy. *The article discusses factors concerning graftless versus grafted approaches to treatment of patients with limited bone volume and describes the use of short dental implants as a graftless solution in the edentulous maxilla.*

Extramaxillary Zygomatic Implants: An Alternative Approach for the Reconstruction of the Atrophic Maxilla

Ori Blanc, Dekel Shilo
Ann Maxillofac Surg Jan-Jun 2020;10(1):127-132

Limited bone quality in the posterior maxilla results in low success rates for dental implants. Various bone augmentation methods have been described, yet most require two-step surgical procedures with relatively high rates of resorption and failure. An alternative for these patients is zygomatic implants. Zygomatic implants utilize the basal craniofacial bone. A retrospective study was conducted on 25 patients exhibiting ridges classified as V-VI according to the Cawood and Howell classification. Seventy-six extramaxillary zygomatic implants were placed. Immediate rehabilitation was performed with a mean follow-up of 18.6 months.

Three implants failed, and two were replaced successfully. No significant bone loss was observed in the rest of the implants. Soft tissue around the implant heads healed properly. All implants were prosthetically rehabilitated successfully. Zygomatic implants allow for immediate loading of an atrophic maxilla. The emergence of the implant is prosthetically correct compared to the intrasinus approach, leading to better dental hygiene and decreased mechanical resistance. 96.1% of the implants survived, with good anchorage and proper soft tissue healing and rehabilitation. *The authors suggest using extramaxillary zygomatic fixture as the first line of treatment in severe atrophic maxilla.*

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