

# ORAL SURGERY CARE



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Spring 2022

Happy Spring!

We hope you enjoy our quarterly newsletter with summaries of recent oral surgery and implant dentistry literature.

I am excited about the initial success of our advances in improved workflow for you and your patients with implant crowns. Scannable temporary abutments make it possible for us to take a digital implant-level impression in our office, which we send to the lab of your choice for crown fabrication. You need only to provide your lab with the work order. This eliminates the need for an impression appointment in your office, which saves time in your patient's schedule and decreases chair time for you. Contact me if you are interested in more details.



Oral Surgery Care

We remain grateful for your trust in our care and appreciate your referrals. We are proud of the experience we provide for your patients, and are always working to make it even better.

Best Regards,

*Dr. Brent Florine*

## Soft-Tissue Conditions Around Dental Implants

Guo-Hao Lin, Iman M Madi, et al  
*Implant Dent 2020 June 28(2):138-143*

The purpose of this article was to review the current understanding regarding periimplant soft-tissue conditions to minimize risk of periimplant mucositis and periimplantitis. An electronic search was performed in 4 different databases. Articles were reviewed and summarized if the following criteria were met: published evidence with recommendations on soft-tissue conditions around dental implants. An evaluation of various soft-tissue parameters, including the need of keratinized mucosa, periimplant mucosal height and phenotype, midfacial tissue level, and papillary fill, was performed based on the currently available

evidence. The need of keratinized mucosa is the parameter investigated the most. A trend favors a need of a wide band of nonmobile keratinized mucosa is seen with the benefit of less incidence of periimplant mucositis. In addition, the influence of the mucosal height and tissue phenotype on periimplant tissue health remains inconclusive.

Although other soft-tissue parameters, including papillary fill and midfacial tissue level, are not yet proven to be related to periimplantitis, they play a crucial role to achieve successful esthetics. *A limited amount of evidence was identified to correlate periimplant soft-tissue parameters with periimplantitis. However, a wide band of nonmobile keratinized mucosa, an adequate periimplant mucosal height, and a thick tissue phenotype might reduce the incidence of tissue inflammation and future complications.*

## Management of Third Molar Surgery in HIV-positive Patients

Syarifah Nova Zam, Melita Sylvyana, et al.  
*Oral Dis 2020 Sep;26 Suppl 1:145-148*

Third molar surgery is a common procedure performed by oral and maxillofacial surgeons. This kind of surgery is predictable, and complications are infrequent. Immune deficiency is one of the considerations for the

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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.

## HIV-positive Patients ...continued

prevention of complications. HIV patients may be immune deficient. Third molar surgical procedures are associated with bleeding and increased risk of infection. Improvement in oral hygiene must be encouraged, such as pre-operative scaling. Prophylactic antibiotics and history of anti-retroviral therapy should be considered. Seven cases of third molar surgery in HIV patients were handled at the oral and maxillofacial surgery department. Intraoral examination showed typical lesions of HIV patients such as oral candidiasis, hairy leucoplakia, necrotizing ulcerative periodontitis, oral ulcers and also pericoronitis of third molars.

Radiological examination showed impacted teeth in the upper and lower the third molar region. Third molar treatment was carried out as elective surgery under general anaesthesia. Prophylactic antibiotics were given to the patients as standard of care. Treatment planning for HIV-positive patients follows the same sequence as with other patients, and the priorities are to remove local infection and prevent further dental disease. *Third molar surgery in HIV-positive patients can improve dental health which can affect the quality of life. Prophylactic antibiotic should be used to prevent infections. Bleeding control also needed to avoid complications.*

## Biomechanical Comparison of the All-on-4, M-4, and V-4 Techniques in an Atrophic Maxilla

Aysa Ayali, Mazen Altagar, et al.  
*Comput Biol Med 2020 Aug;123-130*

**P**atients with severely atrophied jaws can be challenging in implantology. The All-on-4 treatment concept eliminates advanced augmentation procedures in highly resorbed ridges by preserving the relevant anatomic structures. In addition, the inclination of the distal implants enables the placement of longer implants. Hence, tilting the anterior implants allows longer implant placement, in line with the distal implants of the All-on-4 concept. This study compared the biomechanical aspects of the standard All-on-4 treatment concept with the M-4 and V-4 techniques.

A three-dimensional model of an edentulous maxilla was created to perform three-dimensional finite element analysis. Three different configurations (All-on-4, M-4, and V-4) were modeled by changing the tilt angle of the anterior implants. In each model, to simulate a foodstuff, a solid spherical material was placed on the midline of the incisors and the right first molar region, separately applying an occlusal load of 100 Newtons. The maximum principal stress and minimum

principal stress values were acquired for cortical bone, and von Mises stress values were obtained for ductile materials. *According to the present study's findings, although there were no considerable differences among the models, in general, the All-on-4 group demonstrated slightly higher stresses and the M-4 and V-4 group showed lower stresses. M-4 or V-4 configurations may be used in cases of severely atrophied anterior maxillae to achieve better primary stabilization.*

## Advanced-PRF: Clinical Evaluation in Impacted Mandibular Third Molar Sockets

N Gupta, S Agarwal, et al.  
*J Stomatol Oral Maxillofac Surg 2021 Feb;122(1):43-49*

**T**his prospective study evaluated the efficacy and healing potential of modified formulation of PRF, commonly known as Advanced PRF (A-PRF) in impacted mandibular third molar extraction sockets. Twenty patients with bilateral impacted mandibular third molars were included in this study. Surgical disimpactions were done at 3-4 weeks interval in opposing quadrants of patient. One quadrant received A-PRF while the opposing quadrant in same patient was taken as control. Comparative evaluation was done in terms of pain assessment, analgesics required, swelling, soft tissue healing and trismus on 1st, 3 and 7day follow-up. Comparative assessment of bone healing was also done on 1st, 3and 6month follow-up.

This study involved 12 female and 8 male patients within the age range of 18-35 years. The evaluation of pain, swelling, trismus and soft tissue healing on 3rd postoperative day revealed considerable improvement on A-PRF sites as compared to control sites. The outcomes were found to be statistically significant and analgesic consumption was remarkably less when A-PRF was used. Bone healing evaluation in A-PRF sites on 1st, 3and 6month has shown significantly improved results. *The authors conclude that A-PRF has enhanced the healing potential of soft tissue as well as bone in extraction socket. Apart from that it has also shown promising results in relief of immediate postoperative symptoms like pain, swelling and trismus which improves the comfort and acceptability of surgical procedures by patients. Enhanced healing and patient comfort in a cost effective manner are the highlighting features of A-PRF.*

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