Misch International Implant Institute

Newsletter 19 December 2020

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Join us for our last session at

Margaritaville Resort Hotel Orlando Florida

Session 5

January 15-16, 2021

Immediate Placement & Loading, Soft Tissue Considerations

Prostho Bootcamp

February 19-20, 2021

Fixed and Removable Prosthetics in Oral Implantology

Make your New Years Resolution for 2021 by Joining us at

Westin Irving Convention Center at Las Colinas Dallas, TX

Session 1

February 19-20, 2021

Patient Evaluation, Treatment Planning, & Implant Placement into Abundant Bone

Session 2

April 16-17, 2021

Multiple Implant Placement and Treatment of the Edentulous Arch

Session 3

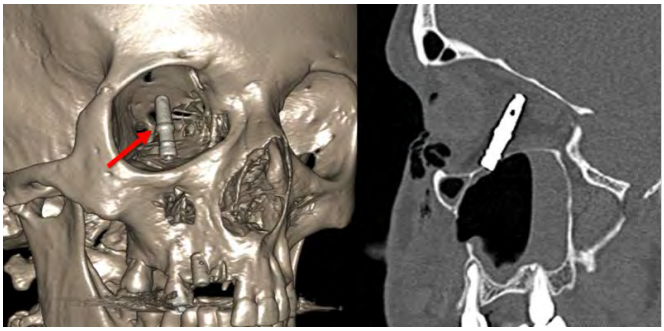
June 11-12, 2021

Implant Placement & Bone Augmentation into Compromised Sites

Displacement and Migration of Dental Implants in the Maxillary Sinus

by Randolph R. Resnik DMD, MDS

Recently, numerous case reports have been published concerning displacement (at the time of surgery) or migration (after surgery or prosthetic treatment) of implants into an adjacent spaces such as the maxillary sinus[1] , ethmoid sinus[2] , sphenoid sinus[3], frontal sinus[4], orbit[5], nasal cavity[6], infratemporal fossa[7] and the anterior cranial base[8].



ETIOLOGY

The majority of migrating dental implants originate in the maxillary sinus, then if not removed, may migrate to adjacent spaces. The timing of implant displacement into the maxillary sinus proper has been shown to range from the time of surgery (implant insertion) to many years after prosthetic rehabilitation.

When implants are found to have been displaced into the maxillary sinus, immediate evaluation and removal should be completed. If left untreated, the implants may become calcified (antrolith), initiate physiologic complications in the maxillary sinus or migrate into adjacent anatomic areas. If the implant migrates through the maxillary ostium, it may be transported through normal physiologic pathways in the paranasal sinuses and surrounding anatomic structures.

PREVENTION

To prevent displacement and migration of implants into the maxillary sinus, ideal treatment planning along with surgical technique (osseodensification) should be adhered to. A comprehensive preoperative evaluation of the posterior maxilla should be completed to determine the amount of available bone below the sinus floor. Because the primary stability of dental implants is dependent on the amount of cortical bone present, implant placement into the posterior maxilla is very susceptible to displacement. The Misch sinus augmentation (SA-1 through SA-4) classification, which is dictated on the amount of available bone present, should be strictly adhered to. In the literature, additional etiologic factors include a change in intranasal pressure, peri-implantitis, and occlusal overloading.

TREATMENT

Treatment of migrated or displaced implants includes the immediate removal, which usually necessitates referral to an oral and maxillofacial surgeon (OMFS) or otolaryngologist (ENT). The most common approaches for removal of implants include the traditional Caldwell-Luc procedure, intraoral approach, or a transnasal approach with functional endoscopic sinus surgery.

CASE REPORT

A recent case report was published in the British Journal of Oral and Maxillofacial Surgery concerning a displaced implant. A 55-year-old woman was referred by her dentist to the hospital for evaluation of an implant that displaced into the maxillary sinus. During implant insertion, because of poor bone quality and quantity, the implant was accidentally displaced into the maxillary sinus. At the hospital, a computed tomographic (CT) scan revealed that the implant had migrated approximately 2 cm into the intraconal compartment of the right orbit. It was found to be located in contact with the optic nerve and adjacent to numerous intraorbital vessels. The implant was successfully removed via an enlarged endoscopic medial maxillectomy.[9] (See Images Above)

1. Kluppel LE ,Santos SE ,Olate S, et al:Implant migration into maxillary sinus: description of two asymptomatic cases. Oral Maxillofac Surg 14: 63 – 66, 2010 .
2. Haben CM , Balys R , Frenkiel S : Dental implant migration into the ethmoid sinus . J Otolaryngol 32 : 342 – 344 , 2003 .
3. Felisati G , Lozza P , Chiapasco M , Borloni R : Endoscopic removal of an unusual foreign body in the sphenoid sinus: an oral implant . Clin Oral Implants Res 18 : 776 – 780 , 2007 .
4. Chiapasco M , Felisati G, et al : The management of complications following displacement of oral implants in the paranasal sinuses: a multicenter clinical report and proposed treatment protocols . Int J Oral Maxillofac Surg 38 : 1273 – 1278 ,2009 .
5.. Griffa A , Viterbo S , Boffano P : Endoscopic-assisted removal of an intraorbital dislocated dental implant . Clin Oral Implants Res 21 : 778 – 780 , 2010 .
6. Li, Shichang, Zhimin Xing, and Lisheng Yu. "Accidental migration of a dental implant into the nasal cavity." Journal of International Medical Research 48.8 (2020):
7. Nocini, Pier Francesco, et al. "A dental implant in the infratemporal fossa: case report." International Journal of Oral & Maxillofacial Implants 28.4 (2013).
8. Cascone P , Ungari C , Filiaci F , et al : A dental implant in theanterior cranial fossae . Int J Oral Maxillofac Surg 39 (1): 92 – 93 , 2010 .
9. Bocchialini, G., Negrini, S., Bolzoni Villaret, A., & Pianta, L. (2020). Intraconal orbital displacement of a dental implant treated with an endoscopically-assisted approach. British Journal of Oral and Maxillofacial Surgery. doi:10.1016/j.bjoms.2020.01.006

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Implant Institute

SURGICAL SESSION 5:

Implant Placement & Loading, Treatment of Peri-Implant Disease & Soft Tissue Considerations

January 15-16, 2021 Orlando, FL

COURSE TOPICS:

- Immediate Placement
- Immediate Loading
- Treatment of Peri-Implant Disease
- Treatment of the Failed Implant
- Soft Tissue Augmentation
- Dermal Fillers
- Use of Lasers in Implant Dentistry
- CBCT Interactive Treatment Planning
- Resonance Frequency Analysis (RFA)
- Practice Management - Integrating Implants In Your Practice

HANDS - ON LAB:

- Immediate Placement Lab
- Guided Implant Surgery Techniques
- Treatment of the Ailing/Failing Implants
- Detoxification of Dental Implants
- 3D Printing
- Removal of Fractured Implant Screws
- Explantation of Dental Implants
- Resonance Frequency Analysis (RFA)
- Laser Detoxification Protocols

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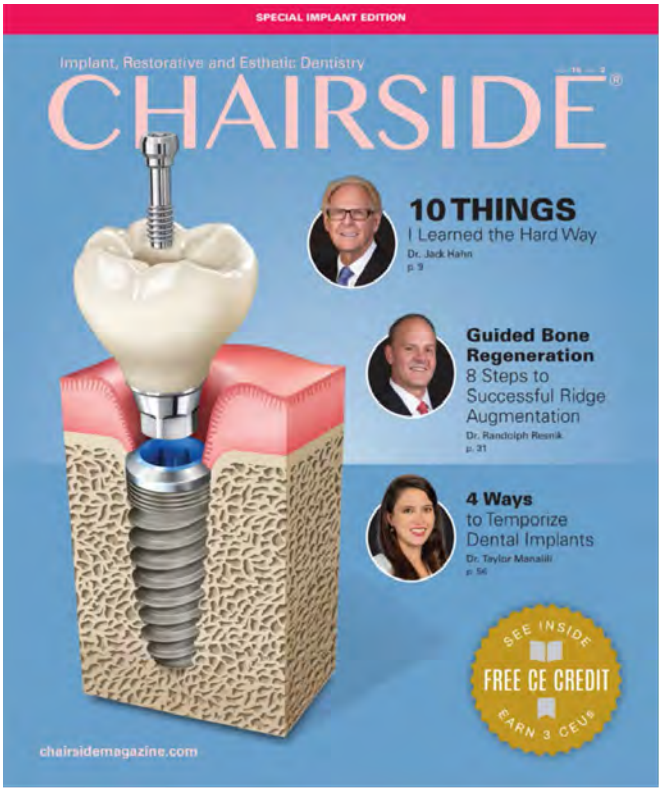
Professor Jon Suzuki Appointed to the FDA Immunology Devices Panel

The Misch Implant Institute would like to congratulate Dr. Jon Suzuki for his appointment to the Food and Drug Administration (FDA) Immunology Devices Panel and Medical Advisory Committee. This prestigious panel is responsible for evaluating the **COVID-19 vaccine applications**, interpreting the vaccine clinical trial data and ultimately **approving the vaccines for use**. Dr. Suzuki is currently providing education seminars to the US Navy, US Army, and US Air Force on COVID-19 immunology. Dr. Suzuki, a faculty member of the Misch Implant Institute for over 20 years, is a world renown Periodontist and Immunologist. In addition, he is currently the Chairman of the Food and Drug Administration Dental Products Advisory Panel in Silver Spring, MD.

Dr. Suzuki is one of the most published academicians in medicine and dentistry. He has published over 200 research papers, chapters, and symposia, abstracts, and 1 textbook in Medical Technology. Dr. Suzuki also holds Clinical Professorships at the University of Maryland, the University of Washington and Nova Southeastern University. He is on the faculty of the US Navy Walter Reed National Medical Center, Bethesda, MD. Dr. Suzuki is Professor Emeritus of Microbiology and Immunology (School of Medicine) and Professor Emeritus of Periodontology and Oral Implantology (School of Dentistry) at Temple University, Philadelphia, PA. USA. He served as Chairman and Director of Graduate Periodontology and Oral Implantology, and Associate Dean for Graduate Education at Temple University. He also served as Dean, Chief of Hospital Dentistry, and CEO of the Faculty Practice Plan at the University of Pittsburgh, USA.

Over the years, Dr. Suzuki has been pivotal in the success of the Misch Institute. As Dean at the University of Pittsburgh and Associate Dean of Graduate Studies at Temple University, he was solely responsible for the development for the Misch Institutes very popular hands-on surgical programs. Most recently, he has been at the forefront for the treatment regimens of peri-implant disease, especially with the use of Nd:YAG lasers (Millenium).



Read Dr. Resnik's Latest Article :

Guided Bone Regeneration: 8 Steps to Successful Ridge Augmentation

&

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QUESTIONS OF THE MONTH

#1: CBCT QUESTION OF THE MONTH

A 45-year old female presented for extraction of the maxillary right first molar (#3). Upon radiographic CBCT evaluation, the following mass was found in the right maxillary sinus (red arrows). The patient was asymptomatic and denied any prior bone graft or sinus related surgery. No bony expansion or erosion of the sinus walls were present. After extraction, the biopsy related a diagnosis of _____?

#2 IMPLANT STUDY OF THE MONTH:

Cigarette smoking may adversely affect wound healing and jeopardize the success of bone grafting and dental implants. Heat and the toxic by-products of cigarette smoking (e.g.nicotine, carbon monoxide, and hydrogen cyanide) have been implicated as risk factors for impaired healing and complications from the dental implant therapy.

In a recent study published (2020) in the Journal of Family Medicine and Primary Care, marginal bone loss around dental implants between smokers and nonsmokers in 500 patients were evaluated. Bone loss was compared at 3 , 6, and 9 month post-prosthetic rehabilitation. Which of the following best summarizes the final results?

a. No difference in bone loss between smokers and non-smokers
b. Smokers had approximately 10 % more bone loss than non-smokers
c. Smokers had approximately 25 % more bone loss than non-smokers
d. Smokers had approximately 50 % more bone loss than non-smokers

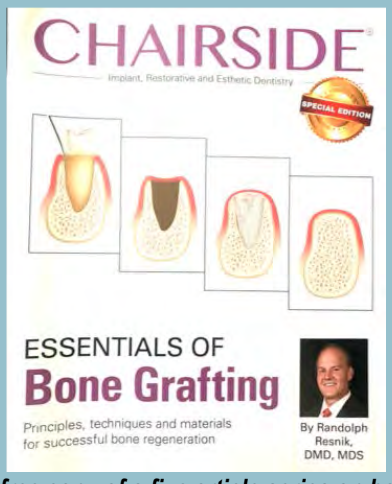
Nazeer, Jazib, et al. "Evaluation of marginal bone loss around dental implants in cigarette smokers and nonsmokers. A comparative study." Journal of Family Medicine and Primary Care 9.2 (2020): 729.

INTERESTING STATISTICS (2020)

- Dental implant procedures increased 6.3% 2019-2020
- 13 percent of implant patients are 65 – 74 years of age
- Total number of dental implants to be placed will increase by 23% from 2020-2026
- Value-priced implants will out pace premium implants in volume sales by the year 2025
- Less than 30% of 150,000 GPs (general practitioners) are trained in bone grafts

Source: https://www.trendstatistics.com/health/dental-implants-facts-statistics/

Dr. Resnik's Special Edition Bone Grafting Booklet:



Call to get a free copy of a five article series on bone grafting procedures (call Glidewell Direct at 888-303-3975)

ANSWERS

#1: CBCT QUESTION OF THE MONTH

ANSWER:

Failed endodontic lesion resulting in a dentigerous cyst (calcified) and hypercementosis

#2: IMPLANT STUDY QUESTION OF THE MONTH

ANSWER:

D = Smokers had approximately 50 % more bone loss than non-smokers

LISTEN TO DR. RESNIK'S WEBINARS *(click link to view)*

- 3DDX # 1: CBCT Treatment Planning (April 29, 2020)
- 3DDX # 2: CBCT Treatment Planning (May 12, 2020)
- 3DDX # 3: Advanced CBCT Tx Planning (Aug 21, 2020)

- Glidewell # 1: Systemic Health and Dentistry: Patient Premedication, Antibiotics, Steroids, Pain Medication
- Glidewell # 2: Surgical Complications: Etiology, Management and Prevention
- Glidewell # 3: Principles of Occlusion for Implant Restorations
- Glidewell # 4: Literature-Based Socket Preservation Protocol
- Glidewell # 5: Treatment Planning in Oral Implantology
- Glidewell # 6: Treatment of the Edentulous Patient: Fixed vs. Removable

- Salvin Dental: Explanation of Implants (September 16, 2020)