

# Misch International Implant Institute

# Director Misch Institute Randolph Resnik DMD, MDS

## **Newsletter 8**

## **APRIL 2019**

#### Next Course: CBCT BOOT CAMP- May 16 and Surgical Session 3 - May 17 - 18 Orlando Florida

UPCOMING COURSES EAST COAST

CBCT BOOT CAMP

May 16, 2019 Orlando, Florida <u>Click to register</u>

FIXED AND REMOVABLE PROSTHETICS June 6-8, 2019 Louisville, KY <u>Click to register</u>

HANDS-ON SURGICAL PROSTHETIC SESSION TBD: August 2019 & December 2019

#### SURGICAL SESSIONS Rosen Shingle Creek Resort

Orlando, Florida



Session 3 May 17-18, 2019 Implant Placement & Bone Augmentation into Compromised Sites

#### Session 4

July 19-20, 2019

Treatment of the Posterior Maxilla: Osteotome & Lateral Wall Technique

#### Session 5

September 13-14, 2019

Immediate Placement & Loading, Soft Tissue Considerations

## POST-OPERATIVE PERIAPICAL PATHOLOGY AROUND DENTAL IMPLANTS

By Randolph R. Resnik, DMD, MDS

Following implant placement and recall examinations, case reports have shown the genesis of periapical lesions (radiolucency), which may suggest a possible precursor to failure of the endosseous implant. In most cases, a periapical lesion is present while the coronal portion of the implant remains free of bone loss. These periapical lesions have been termed apical peri-implantitis or retrograde periimplantitis. The prevalence of these lesions has been shown to be less than 1%, however when the implant site is near an adjacent root canaled tooth, the prevalence has been shown to increase to approximately 8%.

Because of the multifactorial etiology of periapical lesions around dental implants, there is no accepted general consensus on the treatment. The treatment regimen is defined by subjective and objective symptoms.

Asymptomatic. A clinically asymptomatic periapical radiolucency is considered to be inactive when radiographically there exists evidence of bone destruction with no clinical symptoms.

This may result from placing an implant into a site in which the osteotomy was prepared deeper than the implant length, resulting in an apical space. Also, when implants are placed adjacent to a tooth with an apical scar or endodontic pathology, this may result in a radiolucency. Usually, treatment will include close observation and if bony changes do occur, surgical intervention is recommended.



Symptomatic. A clinically symptomatic lesion is most commonly caused by bacterial contamination during implant placement. This may occur when an implant is placed into a preexisting area with bacteria (existing infection, cyst, granuloma, or abscess). When lesions are initiated at the apex, they may spread coronally or facially. Treatment for a symptomatic lesion involves exposure, debridement, surface decontamination, allograft + membrane.

## UPCOMING COURSES WEST COAST

CBCT BOOT CAMP

December 5, 2019 Dallas, Texas <u>Click to register</u>

SURGICAL SESSIONS Omni Mandalay Hotel at Las Colinas Dallas, TX



Sept. 28-29, 2019 Patient Evaluation, Treatment Planning, & Implant Placement into Abundant Bone

#### Session 2

Nov. 1-2, 2019 Treatment of the Edentulous Arch

#### Session 3

Dec. 6-7, 2019 Implant Placement & Bone Augmentation into Compromised Sites

#### Session 4

Jan. 17-18, 2020 Treatment of the Posterior Maxilla: Osteotome & Lateral Wall Technique

#### Session 5

March 6-7, 2020 Immediate Placement & Loading, Soft Tissue Considerations



Misch International Implant Institute



## CBCT BOOT CAMP: The Use of CBCT in Oral Implantology

#### May 16, 2019 Orlando, Florida December 5, 2019 Dallas, Texas

#### Course Topics:

- Normal Abnormal & Variant Anatomy •
- Identification of Anterior Loops
- **CBCT 3D Printing** •
- **Bone Density Evaluation** •
- **CBCT Inherent Complications** •
- Mandibular Nerve Mapping •
- Maxillary Sinus Pathology/Implant Placement
- **CBCT Interactive Treatment Planning** •
- **Digital Impression Surgical Template Design** •
- Surgical Template Protocol
- **CBCT Bone Models** •
- **Immediate Placement & Loading**

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## **Implant Placement & Bone** Augmentation into Compromised Site

## May 17-18, 2019 Orlando, Florida

#### Course Topics:

- **Osseous Defect Treatment Planning**
- **Allograft Augmentation Procedures**
- **Membranes**
- **Platelet Rich Fibrin**
- **Division B Implants**
- **Bone Grafting**
- **CBCT Interactive Treatment Planning** Complications

#### **Implant Placement Lab**

- **Tissue Stretching** •
- **Tent Screw Membrane Graft** •
- **Platelet Rich Fibrin** •
- **Ramus Harvest Lab** •
- **Ridge Splitting Lab**



## Fixed and Removable Prosthetics in Oral Implantology

#### June 6-8, 2019 Louisville, KY

#### **Fixed Prosthetics**

- Prosthetic Differences between Teeth and Implants
- **Fixed Treatment Planning**
- FP-1, FP-2, FP-3: Procedure Step by Step
- **Monolithic Zirconia Prostheses**
- Screw vs. Cement Prosthetics
- Impression Techniques for Fixed Prosthesis
- **Biomechanics**
- **Fixed Prosthesis Cementation Protocol**
- **Digital Impression Theory & Technique** •
- **Full Arch Prostheses Material Options**
- **Complications for Fixed Prostheses**
- Progressive Bone Loading for a Fixed Prostheses

#### **Fixed Hands-on Lab**

- Screw & Cement Retained Prosthetic Protocol
- **Direct & Indirect Impression Technique**
- Multi-Unit Abutment Lab
- **PMMA** Temporary Prosthesis

#### **Removable Prosthetics**

- **Removable Prosthetic Treatment Planning**
- **Occlusal Concepts for Removable Prostheses**
- **Overdenture Attachment Selection**
- **Overdenture Prostheses Step-by-Step**
- **Complications Removable Prosthesis**
- Progressive Bone Loading for Removable Prostheses
- Screw Loosening & Implant Removal
  - **Peri-Implant Maintenance**

#### Removable Hands-on Lab

- **Removable Impression Techniques**
- Locator Attachment Protocol
- Attachment Abutment Selection
- **Digital Impression Technique**

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## **QUESTIONS OF THE MONTH**



#### **#1: CBCT ANATOMY QUESTION**

In the midline of the mandible, this radiolucent canal (red arrows) is often seen on cross-sectional images. What is this radiolucent canal called? What possible complication may arise from placing an implant in this area?

#### **#2: PROSTHETIC QUESTION**



When inserting a dental implant crown with adjacent natural teeth, ideally a "timed occlusal" scheme should be utilized. What exactly is "timed occlusion"?

#### **#3 IMPLANT STUDY OF THE MONTH:**

Biofilm (plaque) has been shown to be a significant contributing factor in the development of peri-implant disease. A recent study compared two common implant restorative materials (porcelain and zirconia) on the;

- 1. Percent of the material that coated with biofilm
- 2. The thickness of the biofilm

Which material was shown to be superior in preventing biofilm accumulation?



## ANSWERS

#### CBCT Question #1

<u>ANSWER:</u> The radiolucent canal in the mandibular midline is termed the lingual vascular canal (LVC) or mandibular vascular canal and contains the right and left sublingual arteries. In theory, implant osteotomy preparation in this area may lead to significant intraosseous bleeding episodes which may be controlled by placing a direction indicator, surgical drill, or the implant into the osteotomy site to allow for the clotting process.

#### Prosthetic Question #2

<u>ANSWER</u>: (A) In light occlusion, no contact should exist on the implant prosthesis as thin articulating paper or shimstock (approximately 10  $\mu$  m) is easily pulled through. (B) On heavy occlusion (clenching), the teeth will move apically (periodontal ligament), and the implant crown will have light contact (i.e., shimstock having resistance when pulled through). (C) If implant prosthesis and natural teeth occlude evenly with light occlusion, the implant will be in hyperocclusion and subject to biomechanical overload.

#### Implant Study of the Month Question #3

<u>ANSWER</u>: The lowest surface coating (19.0%) and biofilm thickness (1.9 µm) were determined with zirconia while the highest mea values were identified with porcelain ceramics (46.8%, 12.6 µm).

Bremer, Felicia, et al. "In vivo biofilm formation on different dental ceramics." Quintessence International 42.7 (2011).



