

Jour Fixe - Dental Implantology - Canine and Feline

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I. Greeting/Introduction

- a. Opening statement

II. History of Dental Implantology

- a. Mayan Mandibles date back 2000 years ago
 - Sea shells were found imbedded into extraction sockets.
 - See Photo: 0
- b. 1809: 1st metal implant was manufactured from gold and placed into an extraction socket.
- c. Cases using precious metals resulted in a thick connective tissue interface surrounding the implant
 - Resulting in mobility and its subsequent exfoliation and loss.
- d. The 1st implant to show some degree of success was fabricated by Strock in 1937 and was made of vitallium (still used today).
- e. WW2 era: stainless steel was introduced.
- f. 1950's: Dr. Branemark; a (Swedish orthopedic surgeon) accidentally discovered using titanium as an implant material
 - Allowing it to remain out of function for several months resulted in osseointegration.
- g. 1980's: HA was discovered as a bone augmentation material. Used as a surface coating on titanium implants.
 - HA induces bone to form on titanium implants (Osteoinductive).
- h. Much of the early studies published and scientific information gathered are about implants placed in the small animal model.

III. Evolution of Design

- a. Lenny Linknow, DDS
- b. Endsosteal
 - See Photos: 1 & 2
- c. Transosseus
 - See Photo: 3
- d. Sub Periosteal Blades
 - See Photos: 4, 5, & 6

IV. What Are Dental Implants?

- a. Over 100 Implant Companies
 - 6/4 titanium alloy (6% aluminum, 4% vanadium, Zirconia)
- b. Artificial roots placed into the bone to provide a solid base for tooth replacement
- c. Most implants are endosseus

- d. Implant systems consists of several parts
 - Implant body (fixture)
 - Abutment portion
 - Prosthetic portion
- e. Various sizes/shapes
 - Screw-types
 - See Photos: **7, 8, & 9**
 - Blades
 - See Photos: **10, 11, 12, 13, 13a, & 14**
 - Push-ins
 - See Photo: **15**

V. Implant Interfaces

- a. High quality surfaces
 - Acid Etched, Sand Blasted, Hydroxyapatite (HA), Oxidized
- b. Clean and bacterial/viral/allergic free
- c. Bone should attach to the titanium surface of the implant with a glycoprotein “Crazy Glue”
- d. Bone to implant union is known as osseointegration
 - See Photos: **16 & 17**

VI. Indications for Dental Implants

- a. **Maintains Alveolar Bone**
 - Dentists/Oral surgeons have realized for a long time that retention of natural teeth in the alveolar bone is necessary for maintenance of the alveolar bone.
 - Most experienced clinicians in implant dentistry have believed for years that the addition of implants into bone (in humans) will help maintain the existing bone from further resorption from the extraction site.
 - Validated by many scientific articles in the literature, attesting to implants maintaining alveolar bone.
- b. **Failing or Diseased Teeth**
 - Large functional teeth can benefit from immediate implant placement
 - “Example: PM 4’s, M1’s; Maxillary/Mandibular incisors; canine teeth (Canine/Feline)”
- c. **Root Canal Therapy (RTC)**
 - When extensive and expensive (RCT, Root Resorption, Post Crown and Crown Prep/Prosthesis) is being considered for a tooth with a poor prognosis; extraction of the tooth and replacement with an implant can be easier, less expensive, and gives a better prognosis that pursuing “Heroic Treatment”.

VII. Implantology Cases

- a. Feline Dental Implants Case #1 & 2
- b. Feline Dental Implants Case #3 & 4
- c. Feline Dental Implant Case #5
- d. *Feline Bilateral Implant Video**
- e. Canine Dental Implant/Crown Restoration #204 - Case #1
- f. Canine Dental Implant//Crown Restoration #208 – Case #2