ABOI/ID Part II Case Presentation – Template
Patient #6

2013
Case # 6

- **Type of Case:**

- **Patient #6:** 3 D Model guided surgery with mandibular tilted implants and immediate loading.
Implant Surgery

Date of Initial implant surgery:

1/25/2011

Number of implants placed and where:

5 mandibular interforaminal implants: #20,21,24,26,29

Did this case require pre-implant placement grafting of any kind?

Yes, at the time of implant placement
- Date of final prosthesis insertion
  
  8/16/2011

- Type of restoration:
  
  Mandibular Fixed Detachable Complete Denture

- Opposing dentition:
  
  Maxillary Conventional Complete Denture

- Current status:
  
  Satisfactory
Patient Medical History

- ASA Classification: ASA II
- Patient’s mental status: Philosophical
- Relevant past and current medical history:
  - High blood pressure, High cholesterol.
- Medications:
  - Amlodipine, Pravastatin, vitamins.
- Allergies: Neosporin cream, trees, grass.
Dental History

- **Missing teeth:**
  - Maxilla: complete edentulism
  - Mandible: partial edentulism, with retained teeth #’s 22, 23, 24, 25, 26, 27

- **Periodontal status:**
  - Generalized chronic periodontitis

- **Occlusion/ Angle Classification:** N/A

- **Tendency for Kelly Syndrome / Combination syndrome**
Pre-Surgical X-Ray (insert)
Pre-Surgical X-Ray (insert)
Social History

- Smoking: no
- Alcohol: no
- Drug/substance abuse: no
Treatment Planning

- **Surgical Plan:**
  - Extraction of all remaining mandibular teeth.
  - Alveoloplasty and placement of 5 interforaminal implants based on 3D Model guided surgery templates.
Prosthetic Plan

- Prosthetic plan:
  - Fabrication of an immediate complete denture that was used for immediate loading and conversion to a provisional fixed complete mandibular denture.
  - Fabrication of a new maxillary conventional complete denture and a mandibular definitive fixed complete denture.
Informed Consent (insert)

CONSENT FORM FOR IMPLANT TREATMENT

I understand that implant success is dependent upon a number of variables including, but not limited to: operator experience, individual patient tolerance and health, anatomical variations, patient home care of the implant, and the implant material and design. I also understand that implants are available in a variety of designs and materials and the choice of implant is determined in the professional judgment of my dentist.

I have further been informed of the possible risks and complications of implant surgery, anesthesia, and the proposed drugs, including but not limited to: failure of the implant(s), inflammation, swelling, infection, discoloration, numbness (exact extent and duration unknown), inflammation of blood vessels, injury to existing teeth, bone fractures, sinus penetration, delayed healing or allergic reaction to the drugs or medications used. No one has made any promises or given me any guarantee about the outcome of this treatment or these procedures. I understand that these complications can occur even if all dental procedures are done properly.

I have been advised that smoking, alcohol or excessive sugar consumption may affect healing and may limit the success of the implant. Because there is no way to accurately predict the gum and the bone healing capabilities of each patient, I know I must follow my dentist’s home care instructions and report to my dentist for regular examinations as instructed.

I have also been advised that there is a risk that the implant or associated metal parts may break, which may require additional procedures.

I authorize perform dental services for me, including implants and other related surgery. I agree to the type of anesthesia that he/she has discussed with me, specifically local, IV sedation or general. I agree not to operate a motor vehicle or hazardous device for at least twenty-four (24) hours or more until fully recovered from the effects of the anesthesia or drugs given for my care.

I understand that my surgical procedure will be done under anesthesia. Initial

Signature:

Date: Initial

Initial

Initial

Initial
Informed Consent (insert)

If an unforeseen condition arises in the course of treatment which, in the opinion of the dentist, necessitates changes from the treatment as originally planned, I authorize and direct my dentist to make any changes that he deems necessary. I further authorize and direct the staff of the dental office to make whatever changes they deem necessary under the circumstances, including the decision not to proceed with endodontic treatment, and I accept the additional cost of the procedure.

I approve any modifications in designs, materials, or care, if my dentist, in his/her professional judgment, decides it is in my best interest to do so.

To my knowledge, I have been given accurate information about my health. I have also reported to my dentist all prior allergic or unusual reactions to drugs, food, insect bites, anesthetics, pollen, dust, blood or bodily diseases, gum or skin reactions, abnormal bleeding or any other condition relating to my health or any problems experienced with any prior medical, dental or other health care and treatment.

I authorize my dentist to make photos, slides, x-rays or any other visual aids for the advancement of implant dentistry in any manner my dentist deems appropriate. However, no photographs or other records which identify me will be used without my written consent.

I realize and understand that the purpose of this document is to evidence the fact that I am knowingly consenting to the implant procedures recommended by my dentist and that I understand the risks inherent in doing so.

I AGREE THAT IF I DO NOT FOLLOW MY DENTIST RECOMMENDATIONS AND ADVICE FOR POST-OPERATIVE CARE, MY DENTIST MAY TERMINATE THE DENTIST-PATIENT RELATIONSHIP, REQUIRING ME TO SEEK TREATMENT FROM ANOTHER DENTIST. I REALIZE THAT ONGOING POST-OPERATIVE CARE AND MAINTENANCE TREATMENT IS CRITICAL FOR THE ULTIMATE SUCCESS OF MY DENTAL IMPLANTS.

Questions I have to ask my dentist:

- What do I use for pain when they're done?
- Pain when they're gone?

I understand that the proposed treatment for my dental problem will involve the following surgical procedure:

Upper:

Lower:

Extractions and/ or Implant, Provisional Fixed Denture

The expected outcome of treatment (prognosis) is:

Upper:

Lower:

I understand that my dental problem can be alternatively treated by:

Conventional Complete Denture or Fixed Denture

I understand that the recommended treatment has the following advantages over the above alternative(s):

Better function and a fixed prosthesis.

I have read this booklet and I FULLY UNDERSTAND THE ABOVE AUTHORIZATION AND INFORMED CONSENT TO IMPLANT PLACEMENT AND SURGERY AND THAT ALL OF MY QUESTIONS, IF ANY, HAVE BEEN FULLY ANSWERED. I HAVE HAD THE OPPORTUNITY TO REVIEW THIS FORM BEFORE SIGNING IT.

Signature of Patient or Guardian

Witness

Witness

Dated 1-11-2011

Dated 11/11/2011

Dated
Alternative treatment plans discussed with patient

- Alternative treatments discussed:
  - A new mandibular RPD with new mandibular anterior restorations and new maxillary complete denture.
  - Mandibular overdenture supported by interforaminal implants.
Implant Surgery

- Operative report of actual implant surgery:

- 1/25/2011

- BP: 149/86, pulse 68, O2 saturation monitored by pulse oximetry: 98%. 2 grams of Amoxicillin administrated oral to the patient in the morning of surgery. Sublingual Halcion 0.25mg administrated.

- Patient was asked to rinse with Peridex (oral rinse containing 0.12% chlorhexidine gluconate) for 3 min and her face was swabbed with betadine solution. Patient was fully draped for surgery and local anesthetic 2 carpules Lido 2% 1/100000 epinephrine was administrated by infiltration buccal and lingual in the mandibular interforaminal area. Slightly lingual to crestal incision in the edentulous areas of first molar to first molar (to avoid mental nerve bundles) along with a intrasulcular incision around all anterior retained teeth was done using15 blade.
Implant Surgery
Implant Surgery
Extractions of all remaining teeth was done using elevators and forceps. Alveolar sockets were curetted and rinsed.

Full thickness mucoperiosteal lingual and buccal flap reflected and mandibular mental foramen identified. A bone reduction coping and a surgical guide were made using a 3D stereolithographic model. With the use of the bone reduction coping template the alveoloplasty was performed under copious irrigation. The surgical guide was further used to create implant osteotomies starting with the central implant #24.

Nobel Active Kit, Nobel Biocare was used for the placement of five Nobel Active implants with the following diameter and length:
Implant Surgery

- Central implant #24: 3.5 x 13mm Nobel Active

  Anterior straight two implants #21,#26: 3.5 x13mm Nobel Active

  Posterior tilted implants #20,#29: 3.5 x15mm  Nobel Active

- All implants had great primary stability around 55-60 N/cm. In addition autogenous bone graft was mixed with xenograft Bio-Oss® (Geistlich) small particles were placed over the labial aspect of the two angled implants and covered with Bio-Gide® (Geistlich) collagen membrane that was stabilized with Vicryl 5.0 sutures. Buccal and lingual flaps were sutured via interproximal and mattress sutures with vicryl 5.0.

- Five multiunit abutments were placed and torqued such as: 35N/cm for the three anterior straight abutments; hand-torqued for the posterior angled multiunit abutments (17° angulation).
Five multiunit temporary coping titanium abutments non-engaging were seated over each multiunit abutment. With the use of rubber dam and repair resin the immediate denture conversion was done intraorally by direct pick up of temporary copings multiunit titanium.

Minimal occlusal adjustments were needed, maintaining the same VDO. The cantilever was reduced and placed in infra-occlusion and access screw holes sealed with PVS.

End procedure BP: 138/75, pulse 71, O2 saturation 99%.

PO instructions reviewed with patient in oral and written form. Patient tolerated the procedure well.
Implant Surgery
Implant Surgery
Implant Surgery
Implant Surgery
Implant Surgery
Implant Surgery
Implant Surgery
Implant Surgery
Implant Surgery
Post Surgical x-ray
Post Surgical x-ray
Post-Operative Care

- What were your post-operative instructions for this patient?

- Patient was told to continue gentle rinsing with Peridex for the following 2 weeks. Also gentle rinsing with lukewarm salt water will aid the healing process (add one half teaspoon of salt to a 6oz glass of water). Patient was given a soft brush (TePe). Gave her and show her how to use straight and custom bend end tuft brushes and interproximal brushes.

- Patient was advice to continue taking Amoxicillin TID until done 21 capsules. Motrin 800mg was prescribed for pain as needed. Smoking is to be avoided for the time of healing. Avoid alcohol with post operative medications.

- Patient was instructed to apply the ice pack that has been given for a period of 20 minutes on and 20 minutes off during the day for the next two days. The application of ice to the outside of the face over the surgical area will minimize swelling.
Patient was told following surgery to restrict diet to liquid diet foods for the first 2 weeks and soft diet for the following 2 months. Also to avoid chewing on the surgical site until the tissue is completely healed. Soft foods such as Jell-O, pudding, mashed potatoes, scrambled eggs and soups are suggested. If having difficulty chewing, try blenderized foods or diet supplements such as Carnation Instant Breakfast and Ensure. A driver family member was escorting the patient to his house.
Post-Operative Care: custom bend end tuft brush
Maintenance

What is your maintenance protocol?

24 hour phone call, if necessary post-operative check in office. 2 week post-operative check with suture removal. Monthly visit for periapical radiographs in order to monitor healing.

List this patients maintenance history:

Patient was seen 24h after surgery, 2 weeks after surgery for suture removal, then once a month.

Occlusal adjustments made and periapical radiographs were taken. Patient was allowed to heal for 5 months.
Prosthetic Restoration

- What type of restoration was placed?
  
  Mandibular fixed complete denture, titanium-resin. Maxillary Complete denture conventional.

- Explain

- Maxillary border molding, final impression, final cast.

- Mandibular open tray impression, verification jig, mounted final casts, jaw relation, facebow.

- Fabrication of titanium “L shape” design framework / GC pattern resin framework / milled framework by Procera, Nobel Biocare.

- Titanium framework fit verification and try in with teeth. Processing and finishing of prosthesis. Lab/clinical remount. Reinforced OHI instructions.
Prosthetic Restoration: 5 months of healing
Prosthetic Restoration: Occlusal view of multiunit abutments
Prosthetic Restoration: Mandibular final impression
Prosthetic restoration: Maxillary final impression
Prosthetic Restoration: GC pattern resin framework to be scanned
Prosthetic restoration: mandibular teeth set on titanium framework
Prosthetic Restoration: Processed mandibular framework Fixed CD
Prosthetic Restoration: Processed mandibular framework Fixed CD
Prosthetic Restoration: Processed mandibular framework Fixed CD
Prosthetic Restoration: Mandibular final prosthesis occlusal view
Prosthetic Restoration: Maxillary final prosthesis
Prosthetic Restoration: smile view
Immediate post prosthetic placement x-ray (insert)
Immediate post prosthetic placement x-ray (insert)
Immediate post prosthetic placement x-ray (insert)
Occlusal view of maxillary arch (insert)
Occlusal view of mandibular arch (insert)
Frontal view in maximum intercuspation position (insert)
Left side (insert)
Right side (insert)
One year post prosthetic placement x-ray (insert)
One year post prosthetic placement x-ray (insert)
Revision (if necessary)

- No revision surgery needed for this patient.