

Full-Arch Implant Reconstruction

Immediate Functional Loading

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Treatment of edentulous patients or dentate patients, with terminal dentition to be transitioned to edentulism poses many challenges, including anatomic proximity to critical oral structures (Maxillary sinus, nasal floor, mandibular canal), limited bone volume, inappropriate bone topography and soft tissue deficiency. A variety of surgical and prosthetic solutions need to be considered. The first question is whether remaining teeth have a reasonable prognosis and can be save. If not, various replacement options can be considered. It is necessary to determine whether utilization of existing bone along with osseous resection to harmonize the bone crest is possible. This option is often utilized for immediate functional loading. In other cases, regenerative solutions such as sinus augmentation and alveolar ridge augmentation will be necessary. Prosthetic solutions, such as fixed and removable have to be considered. This course explores the therapeutic options for fully edentulous patients, focusing on those with compromised bone.

Educational Objectives

- **Decision tree for the treatment of terminal dentition:**
 - Saving teeth vs extraction
- **Prosthetic esthetics:**
 - Smile design
 - Extra-oral and intra-oral landmarks
 - Fundamentals of full arch implant prosthetics.
- **Treatment planning for full arch prosthesis:**
 - Considerations for maxilla vs mandible
 - Opposing arch considerations
 - Patient preferences and expectations
- **Loading considerations:**
 - Primary stability
 - Biologic response to load
 - Immediate vs delayed restoration
- **Implant planning:**
 - Implant selection, position, number & orientation
- **Digital workflow:**
 - Virtual Implant Patient (VIP)
 - Prosthetic and surgical planning
 - Guided surgery Prosthetic design
 - Immediate load prosthesis
 - Definitive prosthesis
- **Prosthetic solutions:** Fixed vs removable
- **Prosthetic design:**
 - Cantilever length
 - Prosthetic Space requirement
 - Abutment selection
 - Material selection
- **Surgical guide**
 - Digital vs analogue
 - Surgical and prosthetic positions
- **Surgical protocol:**
 - Flap design and management
 - Suturing technique around prosthesis
 - **Osseous resection guidelines:**
 - Bone crest correction
 - Prosthetic space creation
 - Smile line consideration
 - Considerations for prosthesis contour
 - **Soft tissue management**
 - Mucosal phenotype (biotype) conversion therapy
 - Vestibular depth extension
 - Contour augmentation
- **Anatomic considerations**
 - Surgical anatomy
 - Maxilla vs mandible
- **Steps for fabricating a conversion prosthesis**
 - Conversion of existing prosthesis
 - Fabrication of new prosthesis
- **Complications:**
 - Prevention and management
- **Pre- and post-operative Care:**
 - Antibiotics and antiseptics
 - Analgesics
 - Anti-inflammatory agents
 - Nutritional and herbal supplements

Hands-on Workshop Simulated Exercises

- Implant site planning in virtual planning software
- Surgical guide fabrication
- Osseous resection
- Implant surgical placement:
 - Tilted and axial positioning
- Flap management for full-arch reconstruction
- Conversion of removable to fixed prosthesis for immediate functional loading

Live Surgery Demo

- Implant site planning in virtual planning software
- Guided surgery to place 4 to 6 implants
- Osseous resection
- Implant surgical placement: tilted and axial positioning
- Flap management for full-arch reconstruction
- Conversion of removable to fixed prosthesis for immediate functional loading