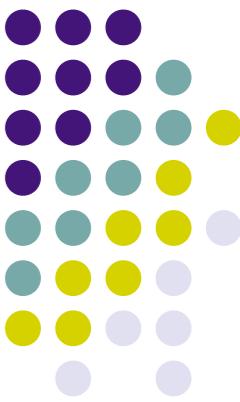
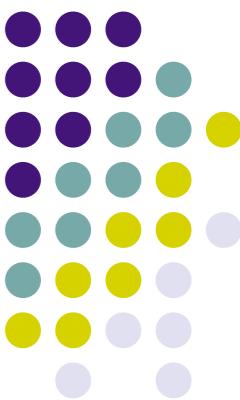


Preprosthetic Surgery



Bony Procedures

- Alveoloplasty/ alveolotomy/ alveolectomy/ alv repositioning, intraseptal alveolotomy
 - refashioning of alveolus-knife edge ridge
 - removal of undercuts, irregularities
 - reduction of tuberosities
- removal of pathology-hyperplasia, roots, teeth, tori, papillary hyperplasia, exostoses
- lowering of mental N
- correction of jaw disproportion



Soft tissue procedures

- Frenectomy/ plasty
- Grafting: mucosal flaps- cheek, palate skin-
 - A: thickness, periosteal coverage, size, transport, application
 - D: hair, contractn, adhesion, taste/ smell/ scarring,
- Vestibuloplasty:
 - Obwegeser (needs adequate ridge, repositions muscles, for maxilla, mandible)
 - Kazanjian, Edlan, Hopkins (for mand)
 - Schuchardt, Tideman (for max)

Preservation is IMPORTANT

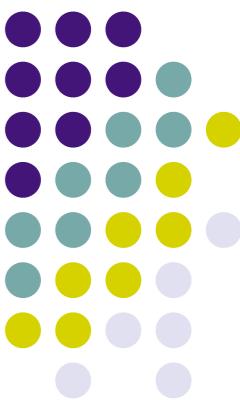
than

Replacement of lost

Prevention of tooth loss.

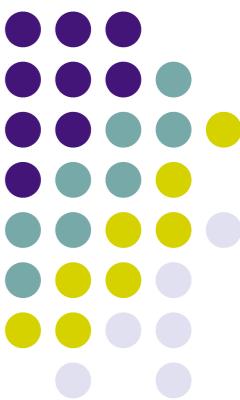
Prevention of RRR

Prevention of deficiency
(hormones, vitamins and minerals)



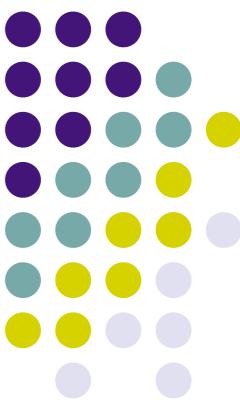
ALVEOLOPLASTY

- Primary : at time of extraction
INTRASEPTAL
- Secondary: later



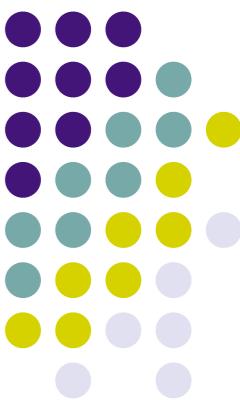
PRIMARY ALVEOLOPLASTY

- Conservation of alveolar bone
- Digital compression of socket after extraction
- If bony undercuts, conservative surgical reduction
- Muco-periosteal flap, buccal reduction, primary closure
- Care-
 - Not distort soft tissues
 - Not decrease depth of buccal vestibule



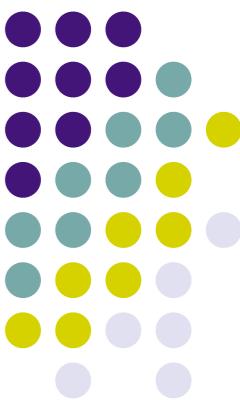
INTRASEPTAL ALVEOLPLASTY

- No flap raised
- Intraseptal bone removed
- Buccal plate in-fractured by digital pressure
- Advantage:
 - Maintenance of periosteal attachment to labial plate of bone
 - Less post-op bone resorption
 - Can decrease buccal undercut by reducing bone height of alveolar ridge



SECONDARY ALVEOLOPLASTY

- Bony augmentation to be considered before removal
- If bone removal necessary, maximal preservation of alveolar bone
- Minimal flap reflection to reduce post operative bone resorption & remodelling

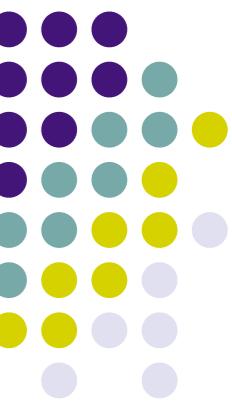


EXCESS TISSUE IF FIBROUS

- Crestal elliptical incision
- Mucosa undermined
- Fibrous tissue removed
- Redundant mucosal tissue excised
- Primary closure

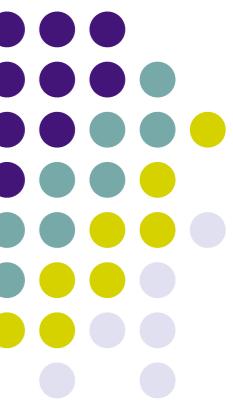


EXCESS TISSUE IF BONY



- Muco-periosteal flap reflected
- Adequate bone removed
- Excess mucosal tissue removed
- Bone filed ,irrigated copiously
- Primary closure

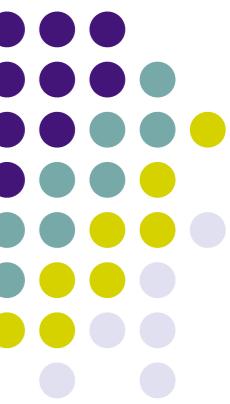




BUCCAL EXOSTOSES

- Common in maxilla
- Creates undercuts
- Rongeurs/ rotary bur
- Primary closure

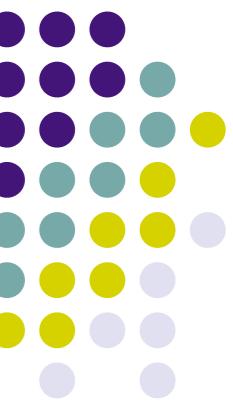




PALATAL TORUS

- F:M 2:1
- Etiology ?
- Composed of cortical bone
- Some have cancellous also
- Does not require removal unless prosthesis required

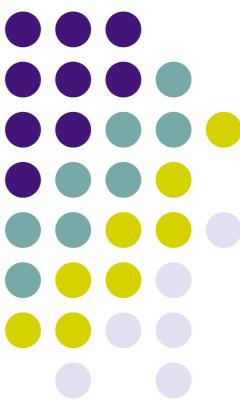




PALATAL TORUS

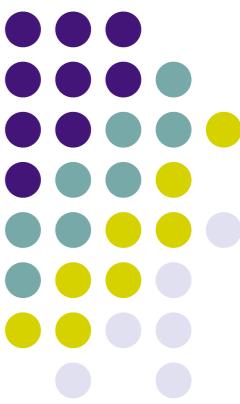
- Crevicular incision/ single midline palatal/ double ended Y/ elliptical
- Full thickness muco-periosteal flap
- Retraction sutures for good exposure
- Bone sectioned-bur, chisel
- Excess tissue excised
- Primary closure





PALATAL TORUS

- CARE:
 - Avoid perforation into nasal cavity
 - Oro antral fistula
 - Palatal tissue necrosis
 - Hematoma formation
 - (Stent, splint, denture)



MANDIBULAR TORUS

- M:F 1:1
- Single/ multiple/ lobulated
- Surgery: envelope flap
- Care: not to perforate flap



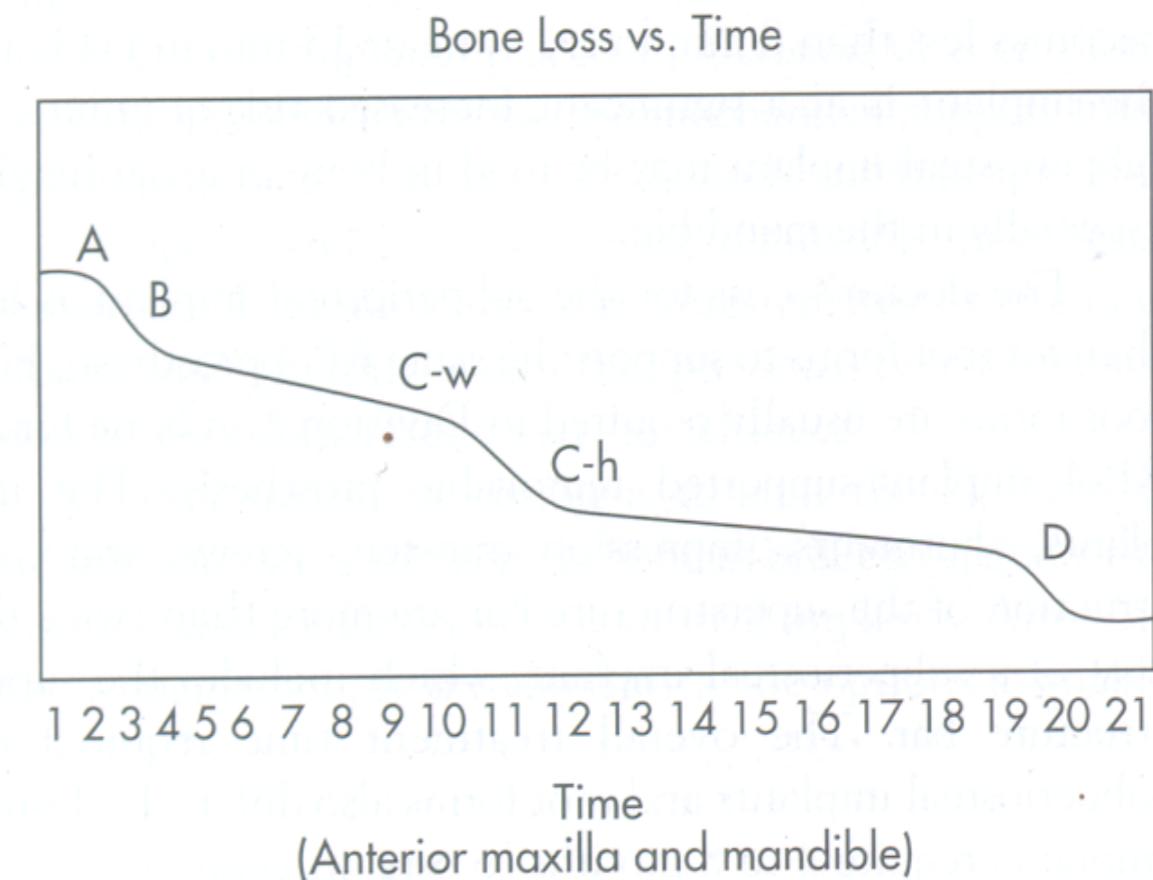
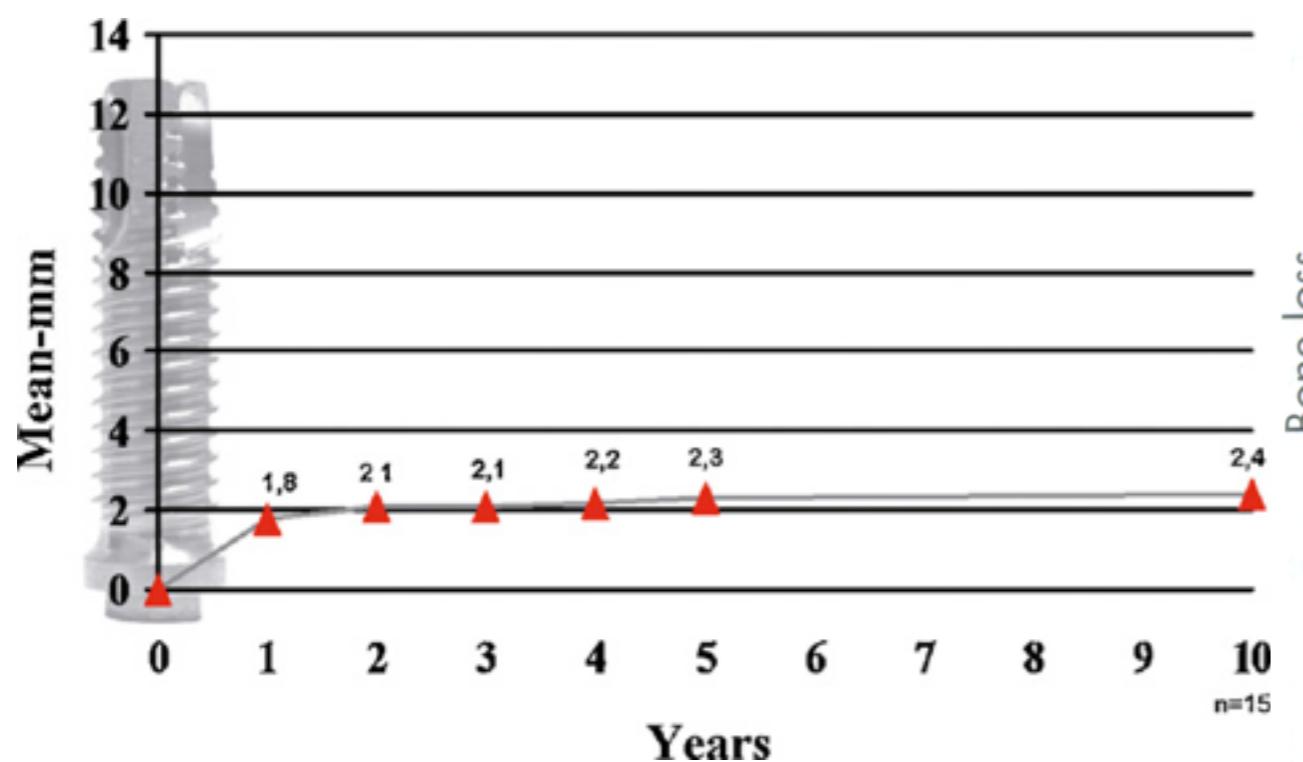
Leading Clinical Paper
Pre-Implant Surgery

A 9–14 year follow-up of onlay bone grafting in the atrophic maxilla

E. Nyström¹, H. Nilson²,
J. Gunne², S. Lundgren¹

¹Department of Oral Maxillofacial Surgery,
Umeå University, Umeå, Sweden;

²Department of Prosthetic Dentistry, Umeå
University, Umeå, Sweden



RRR: Classification

Bone QUANTITY

- Class A : most of the alveolar bone present.
- Class B: moderate residual ridge resorption.
- Class C: advanced residual ridge resorption.
- Class D: moderate resorption of the basal bone.
- Class E: extreme resorption of basal bone.

Branemark, 1985, classified alveolar ridge on basis of bone quantity and bone quality seen on radiograph

RRR: Classification

Bone QUALITY

- Class 1: almost entire jaw composed of homogenous compact bone.
- Class 2: a thick layer of compact bone surrounds a core of dense trabecular bone.
- Class 3: a thin layer of cortical bone surrounds a core of dense trabecular bone.
- Class 4: a thin layer of cortical bone surrounds a core of low density trabecular bone.

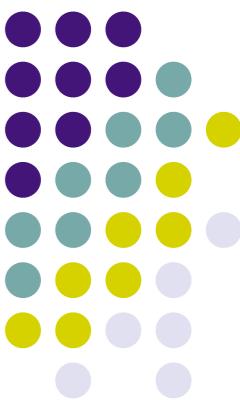
Atwoods Classification

- Order I: pre-extraction.
- Order II: post extraction.
- Order III: high, well rounded.
- Order IV: knife edge.
- Order V: low, well rounded.
- Order VI: depressed.



American college of Prosthodontists

- Type I: residual bone ht >20mm at least vertical ht of mandible.
- Type II: residual bone ht 16-20mm.
- Type III: residual alveolar bone ht 11-15mm
- Type IV: residual alveolar bone ht <10mm.

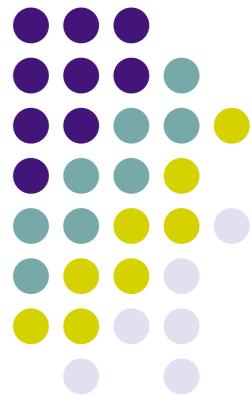


MYELOHYOID RIDGE REDUCTION

(DUE TO VERTICAL BONE RESORPTION IN POST MAND.)

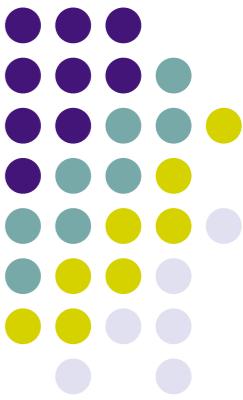
- Incision: crest of alv ridge
Care: not too far lingually as lingual nerve
- Mucoperiosteal flap
- Dissect myelohyoid muscle
- Decrease ridge prominence
- Irrigation
- Primary closure
- Immediate stent/ denture to position muscle inferiorly

BONY AUGMENTATION PROCEDURES



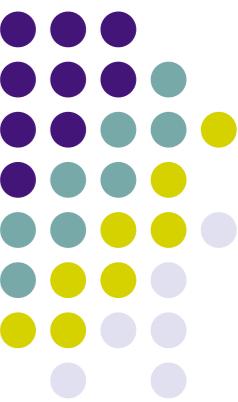
- mandible:
 - bone graft/ HA/ Combi
- maxilla:
 - bone graft/ HA+ bone graft
 - sinus lift/ interpositional bone graft
 - proplast/ silicones/ ceramic
- osteotomies
- mand: sandwich/ visor/ combined/ +_BG? HA/ Proplast
- maxilla: sinus lift+_implants

BONY AUGMENTATION PROCEDURES



- VISOR OSTEOTOMY
 - Mandible split bucco-lingually
 - Lingual cortical plate positioned superiorly
 - Complications:
 - Paraesthesia Inferior Alveolar Nerve
 - Knife edge ridge
 - Secondary vestibuloplasty +-needed
- HOPKINS PROCEDURE
 - Exteriorization of inferior alveolar nerve

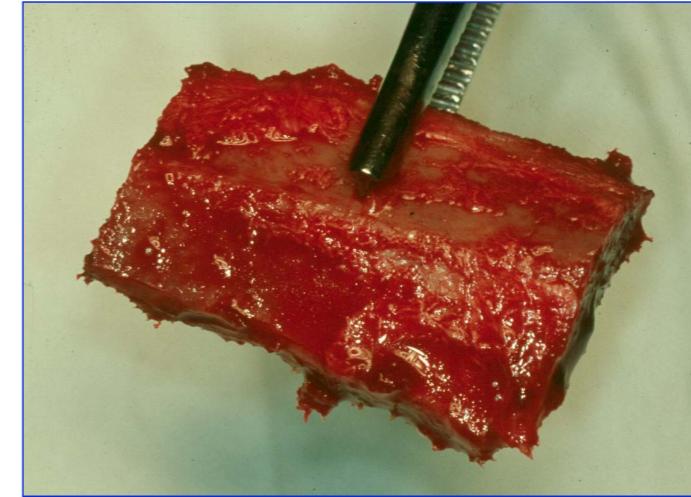
BONY AUGMENTATION PROCEDURES



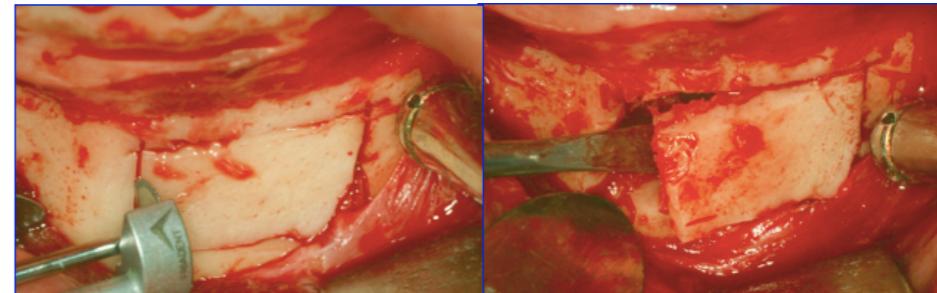
- Autologous bone grafts
- Osseointegrated implants
- Guided tissue regeneration
- Bone induction agents
- Alloplastic materials
- Allogenic bone

Ridge Augmentation

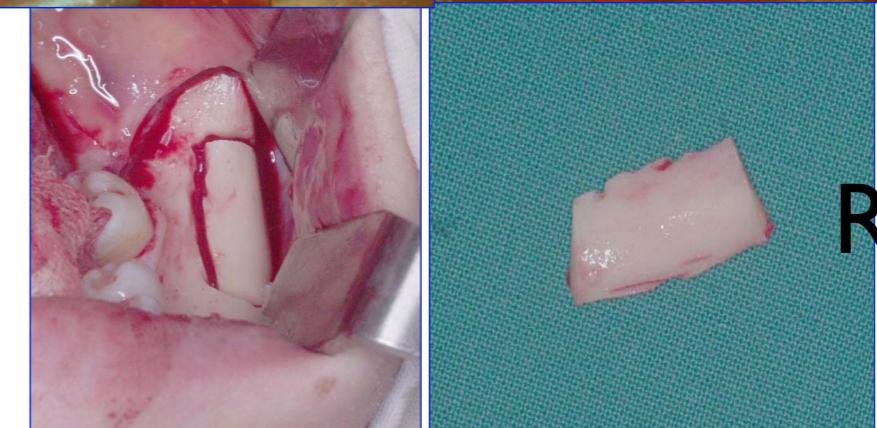
- VERTICAL/
HORIZONTAL
- Bone grafts
- Biomaterials
- GBR (Guided Bone
Regeneration)
- Alveolar distraction
osteogenesis



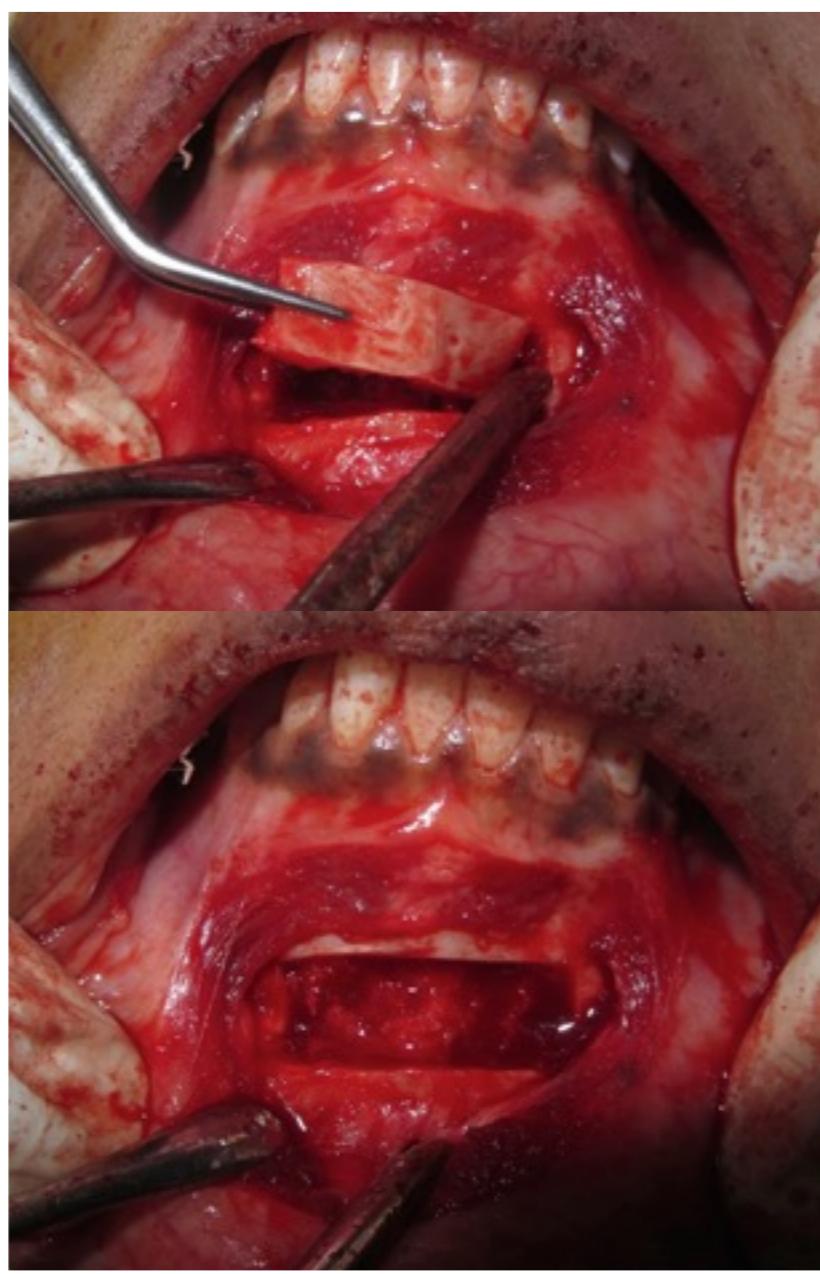
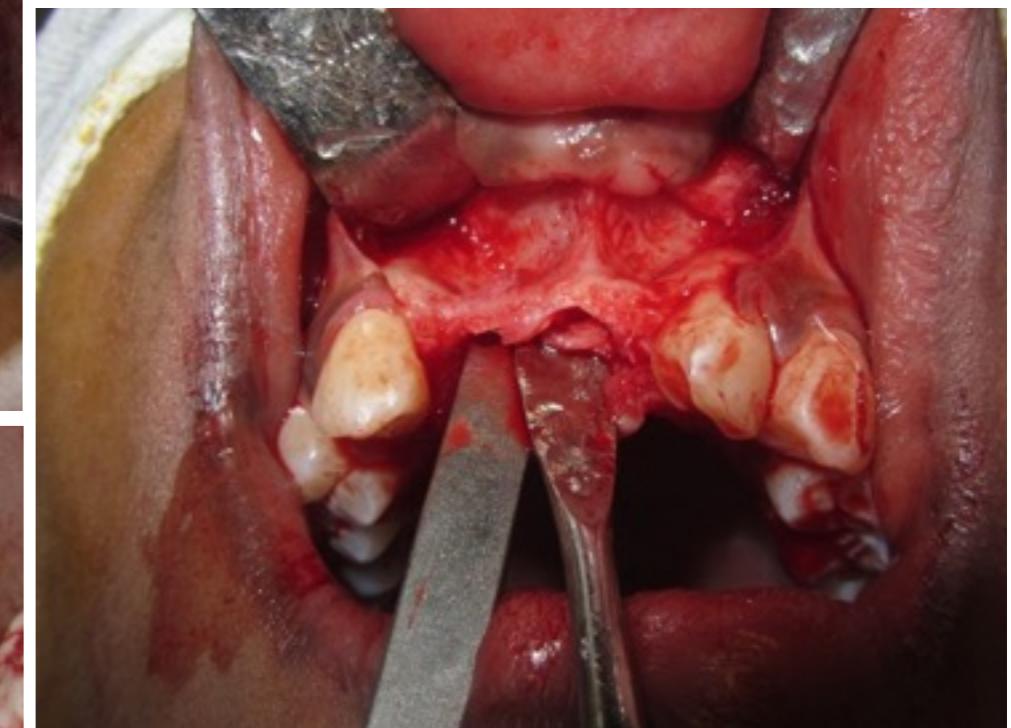
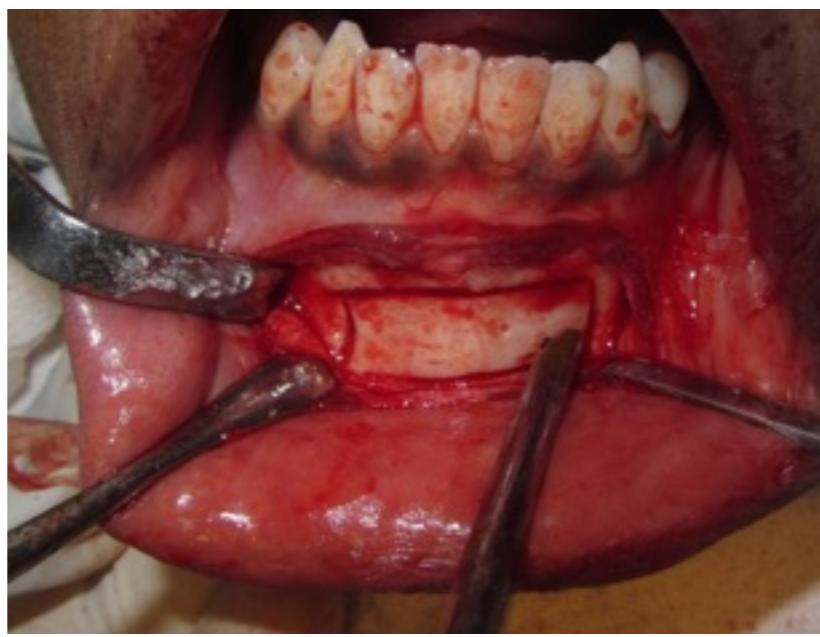
Iliac

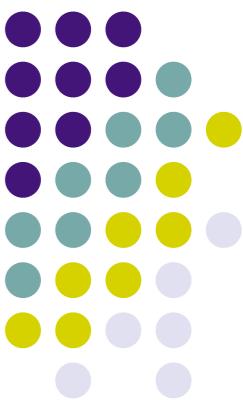


Chin



Ramus





ONLAY GRAFT

Split thickness rib graft

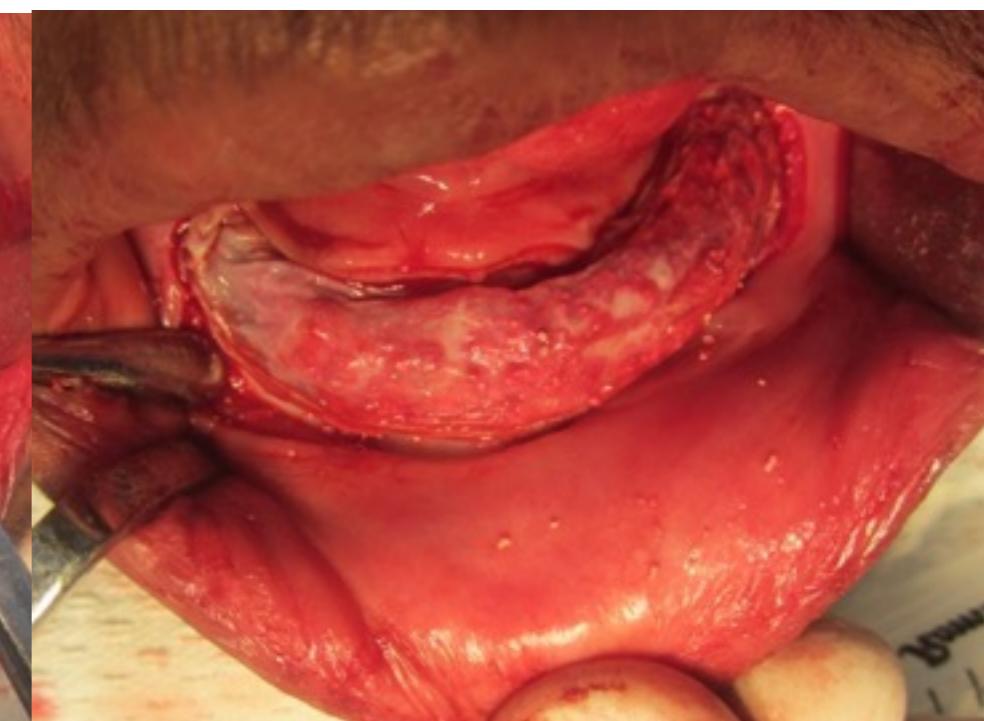
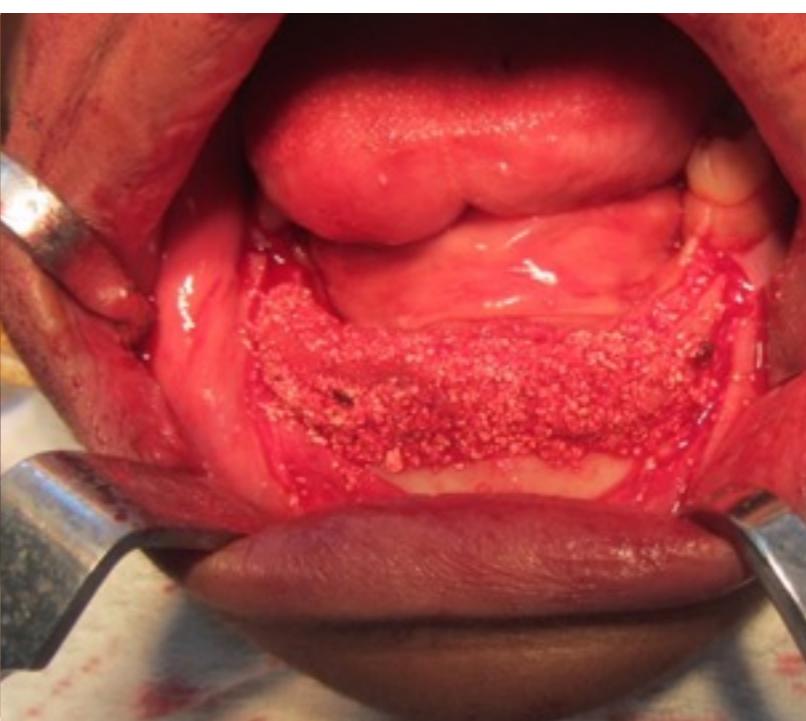
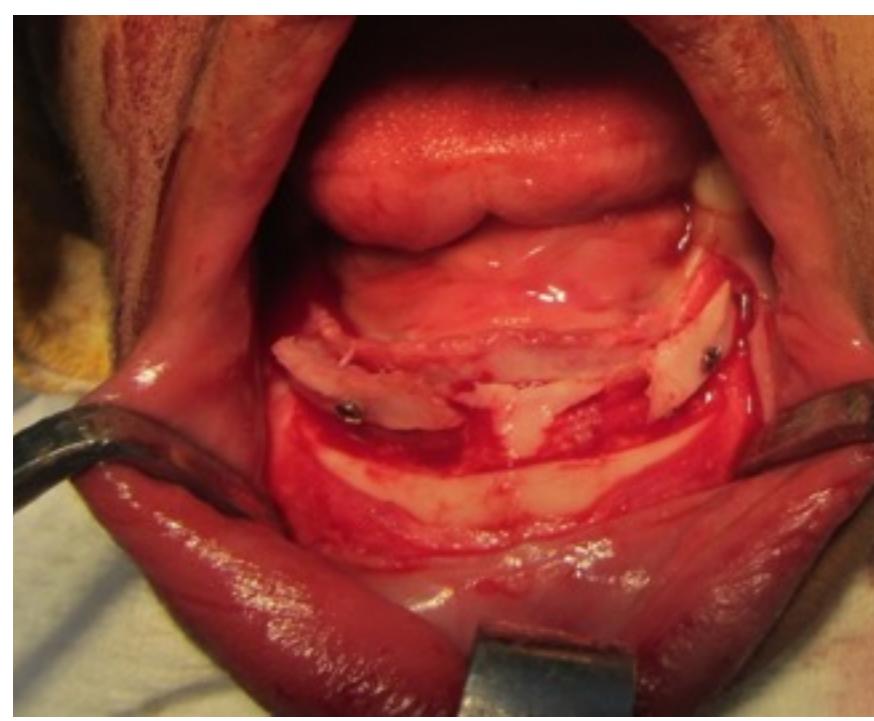
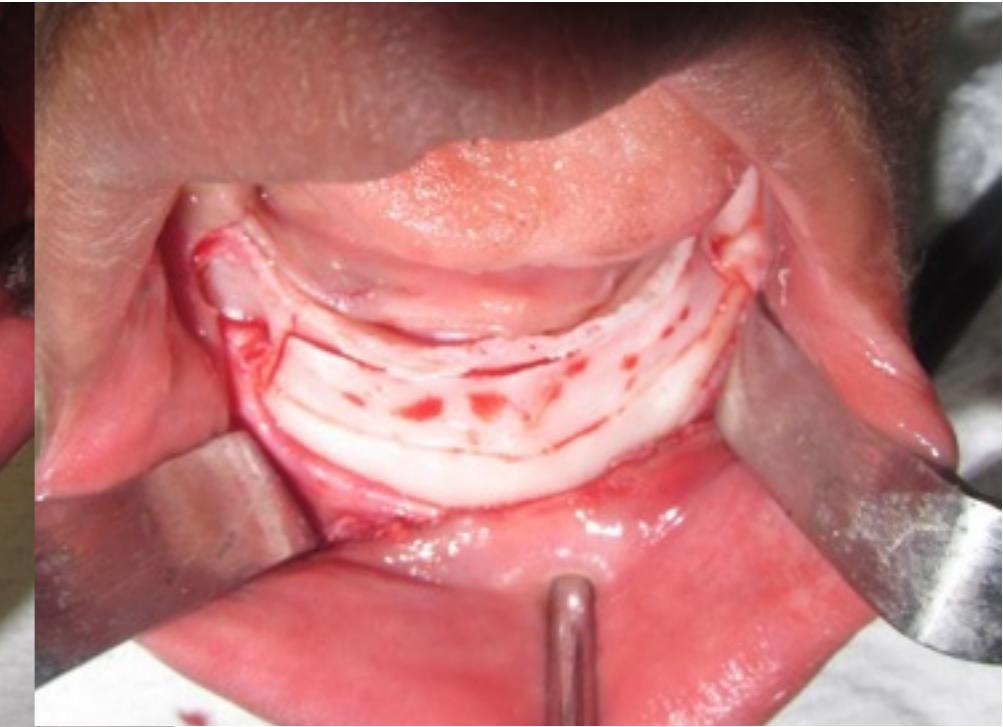
Iliac crest graft

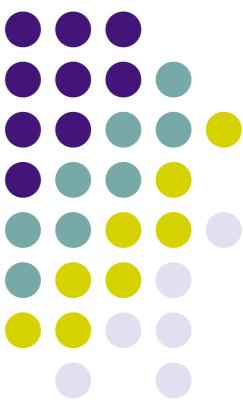
(Disappears within 40 months)

Hydroxyapatite

solid/ porous blocks

Titanium mesh





INTERPOSITIONAL BONE GRAFTS

LESS RESORPTION THAN ONLAY

INFERIOR BONE GRAFT

Resorption rate

- Block graft with Bio-oss : 16.34 %, 17.58 % (Proussaefs, 2002)
- Block bone : Mn 41.5%, Mx 43.5% (Cordaro, 2002)
- Onlay bone graft in 3 years : 14-100% (Wang, 1976)
- Iliac crest block bone : 33% (Bell, 2002)

Question 4

- Alveoloplasty is
 - Digital compression of extraction socket
 - Alveolar recontouring with rongeur/ bur/ file
 - Removal of sharp superior portion of the knife edged ridge
 - All of the above

Question 5

- Reflection of mucoperiosteal flap allows
 - Adequate visualisation
 - Access to bony structures that require recontouring
 - Protect adjacent soft tissues
 - All of the above

Question 6

- CT scan does NOT help to evaluate
 - Ridge height and width
 - Hypermobile fibrous tissue
 - Sinus anatomy
 - Inferior alveolar nerve