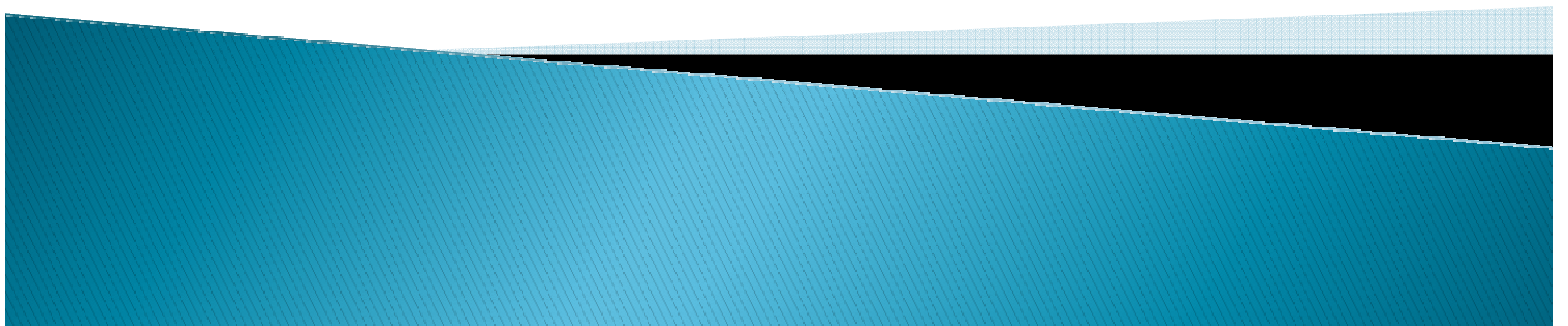
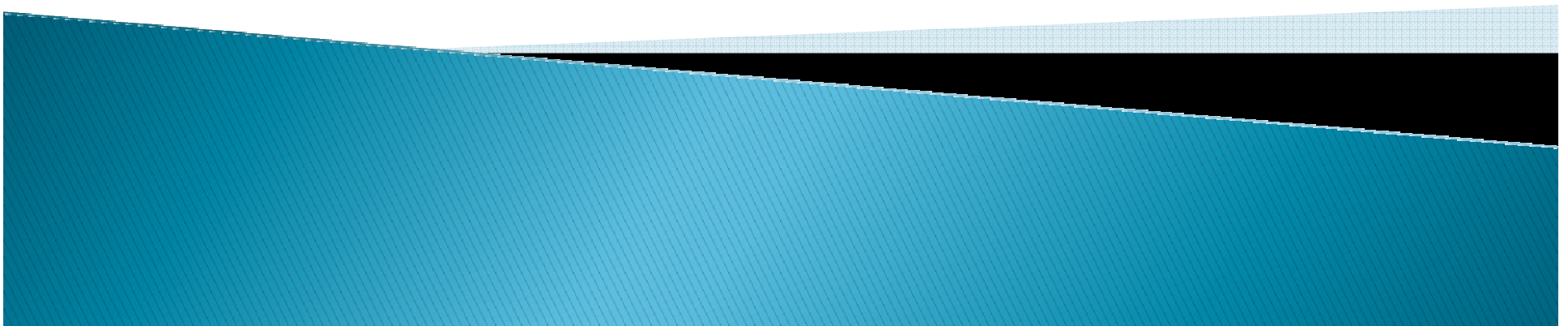


# Complex Facial Fractures



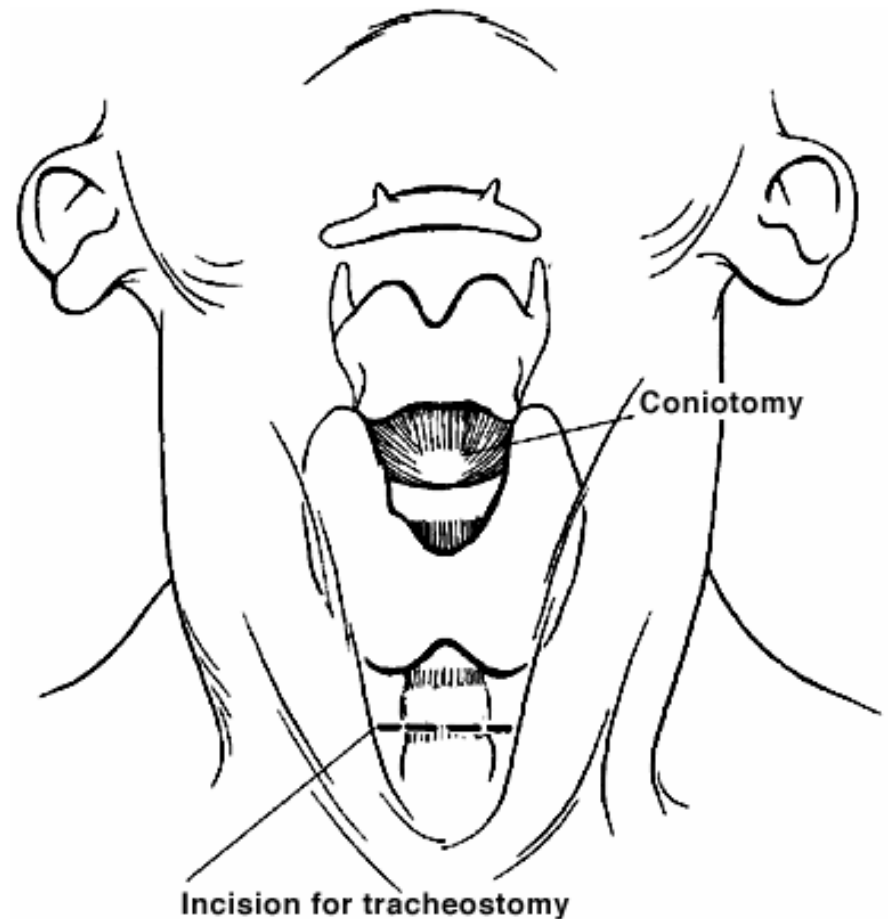
# Disclaimer

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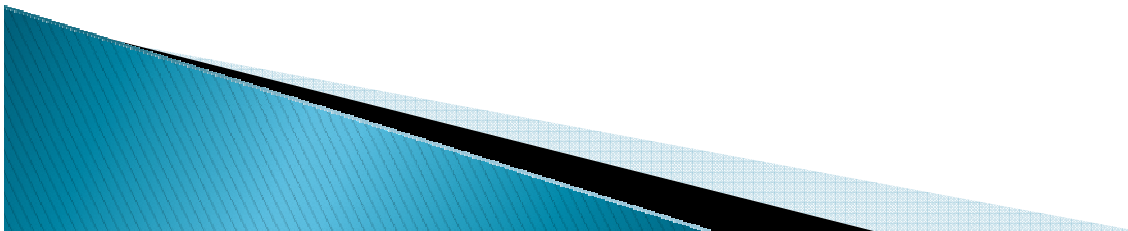
# Airway

- ▶ Chin Lift/Reduction
  - Bucket Handle
- ▶ Endotracheal Tube
  - Oral
  - Nasal
  - Submental
- ▶ Surgical Airway
  - Tracheostomy
  - Cricothyroidotomy



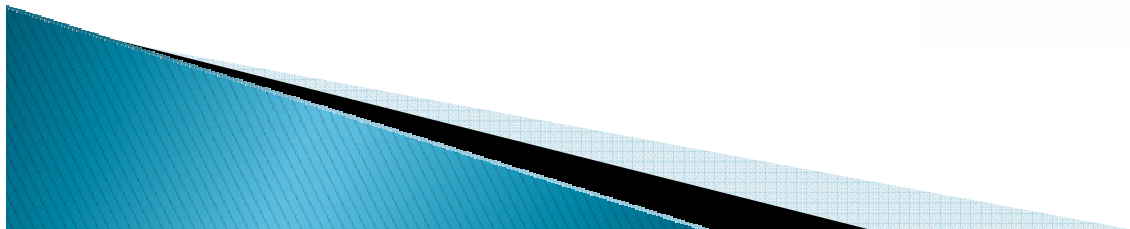
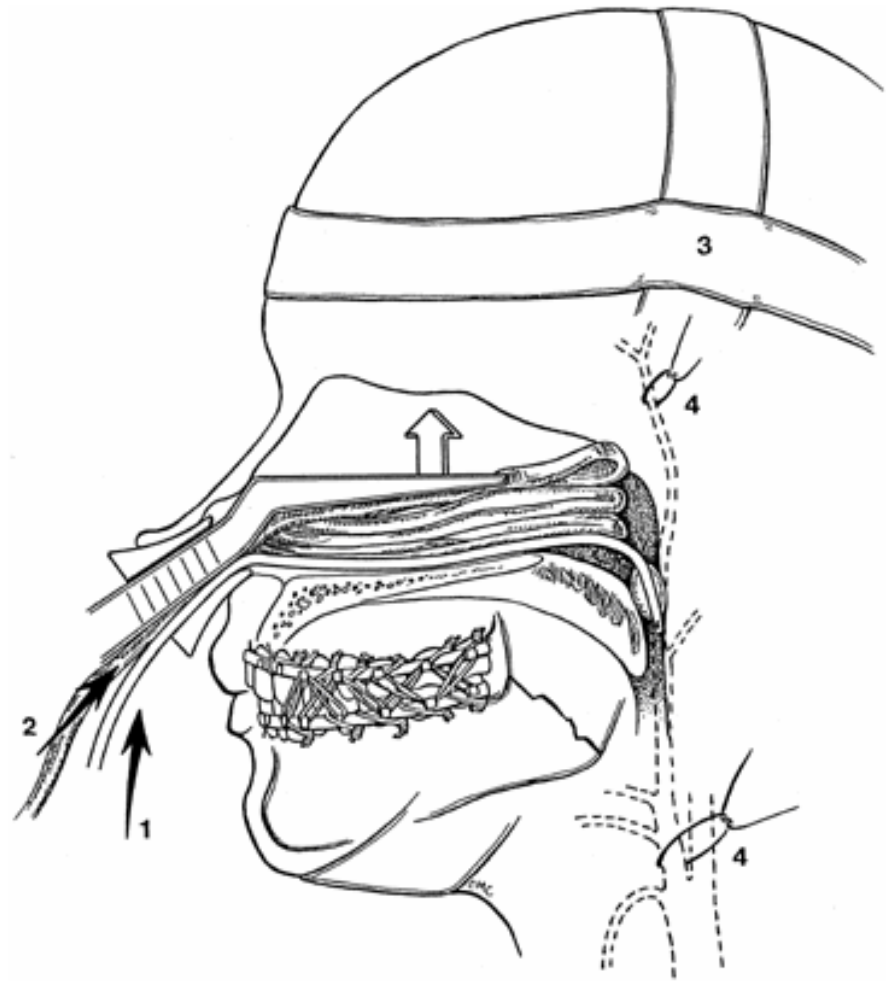
# Regional Bleeding

- ▶ **Midface**
  - Reduction
  - Packing
  - Explore/Ligate
- ▶ **Mandible**
  - Chin Lift/Reduction
- ▶ **Scalp**
  - Suture
- ▶ **Other Areas**
  - Direct Pressure



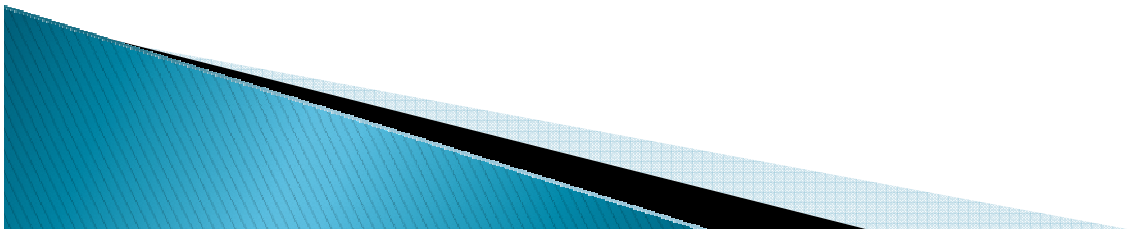
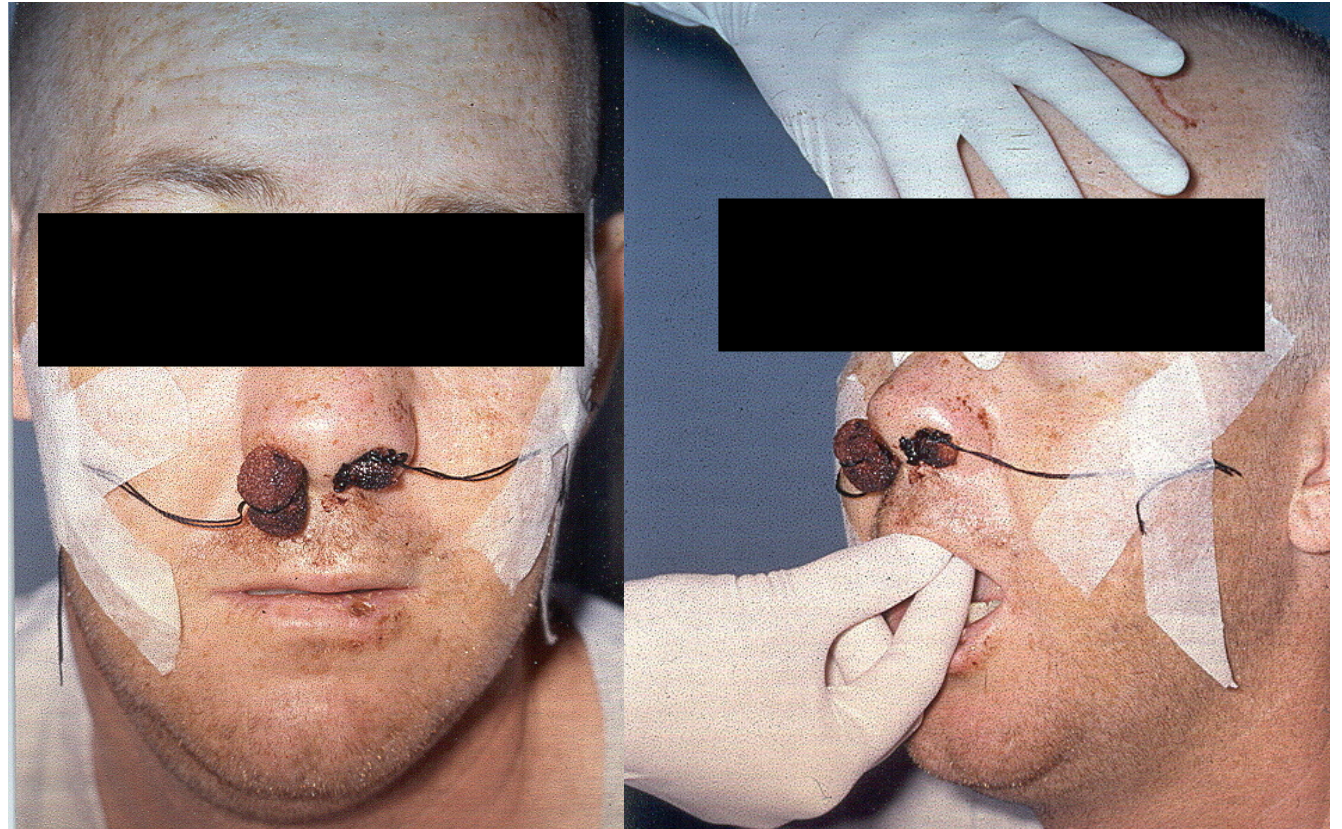
# Control Bony Bleeding

1. Posterior Nasal Balloon
2. Anterior Nasal Packing
3. Reduce Fracture & Stabilise
4. IR /Vessel Control



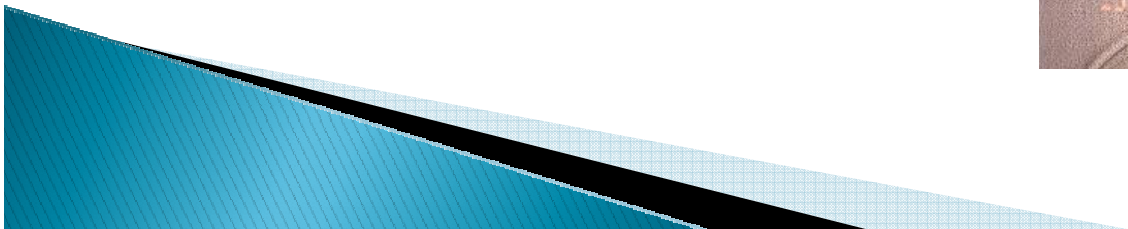
# Midface

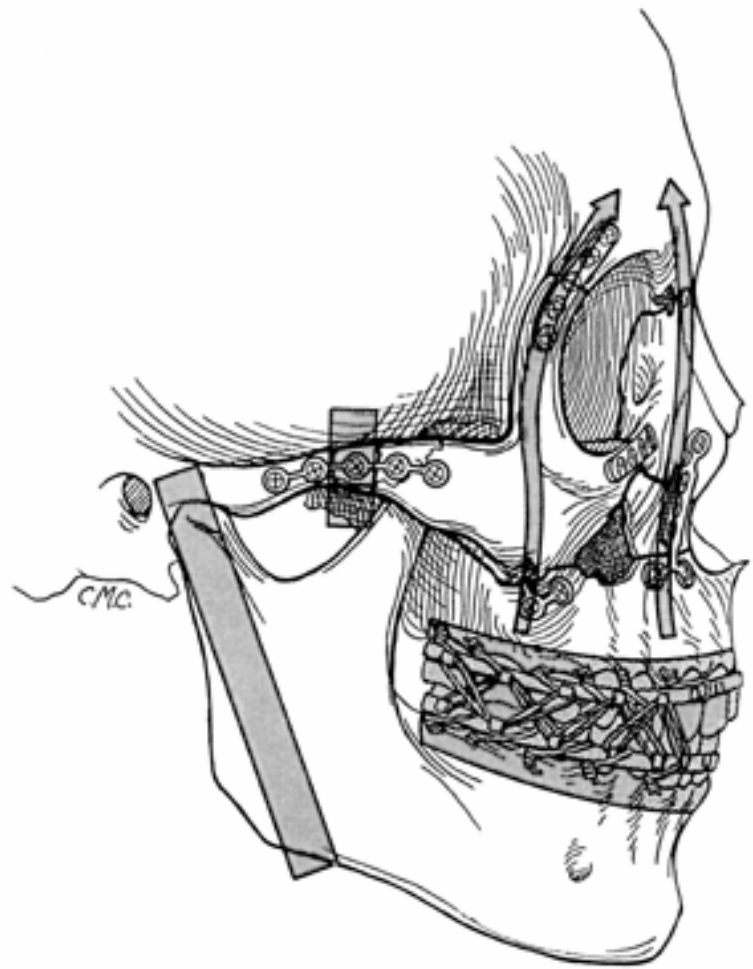
- ▶ Reduce
- ▶ Pack
- ▶ Fix
- ▶ Explore
- ▶ Ligate
- ▶ IR



# Reduce Maxilla

- ▶ Disimpact
- ▶ Relocate
- ▶ Impact
- ▶ Stabilise

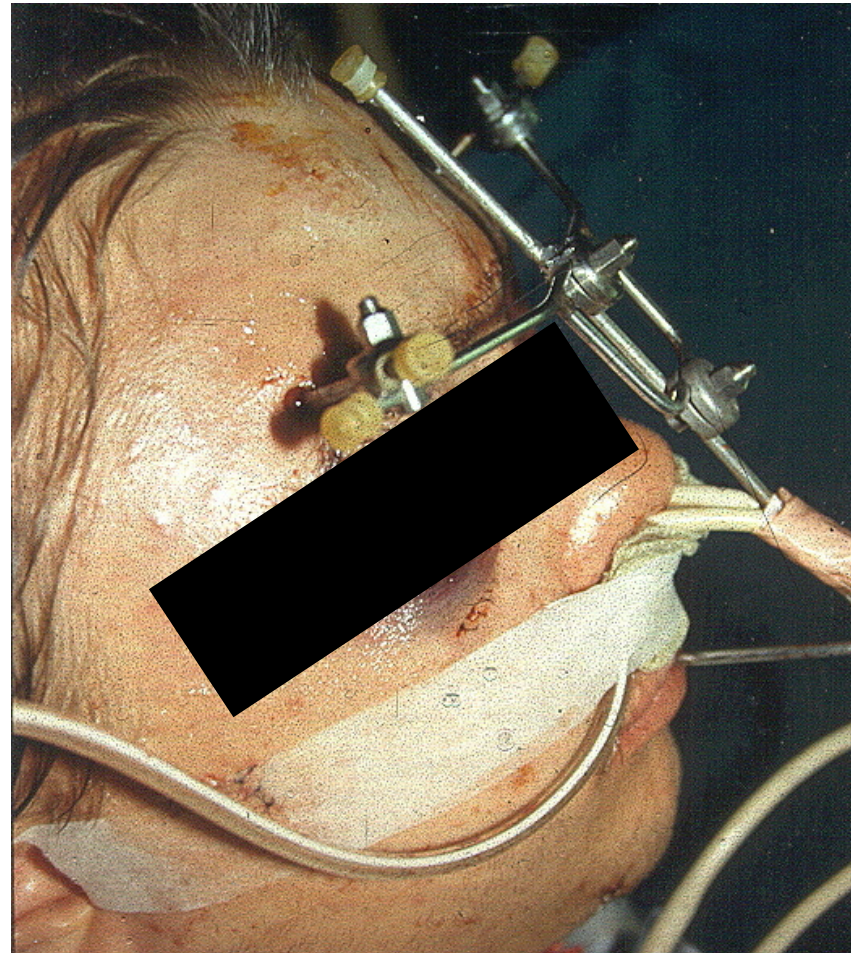






# Packed / Reduced / Fixed

- ▶ Posterior Balloon
- ▶ Anterior Packed
- ▶ Reduced
- ▶ Externally Fixed
- ▶ NGT



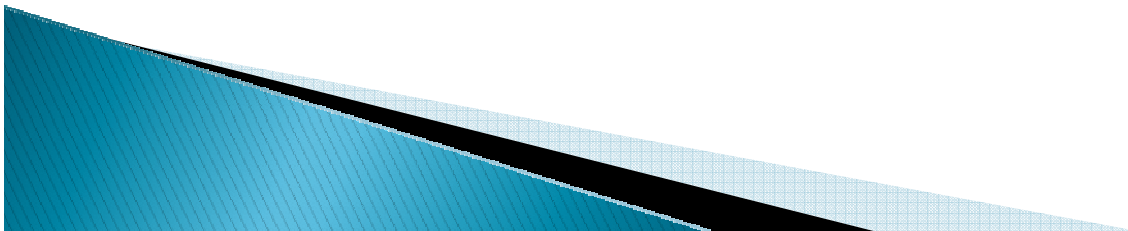
# Scalp Lacerations

- ▶ Pressure
- ▶ Exploration
- ▶ Ligation
- ▶ Suture
- ▶ Compression



# Disability

- ▶ Cns
- ▶ Spine
- ▶ Vision
- ▶ Nerves
- ▶ Other



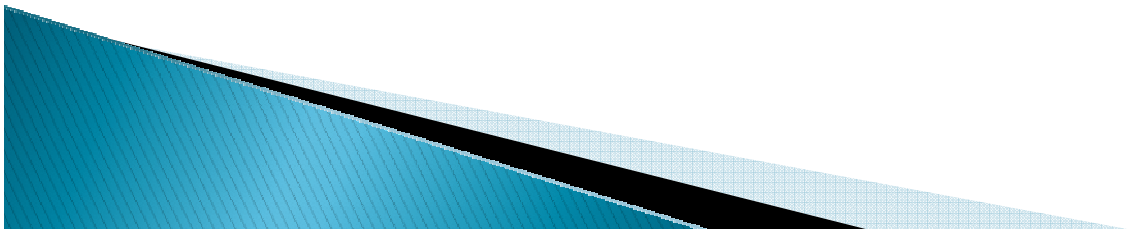
# Spinal

- ▶ Assume Instability
  - Stabilise
    - Collar
  - Assess
    - C-Spine
  - Fix
    - Halo
    - Surgical Fusion



# Specialised Structures

- ▶ Teeth – Oromaxillofacial
- ▶ Eyes – Ophthalmologists
- ▶ Nerves
- ▶ Ducts
- ▶ Complex Structures



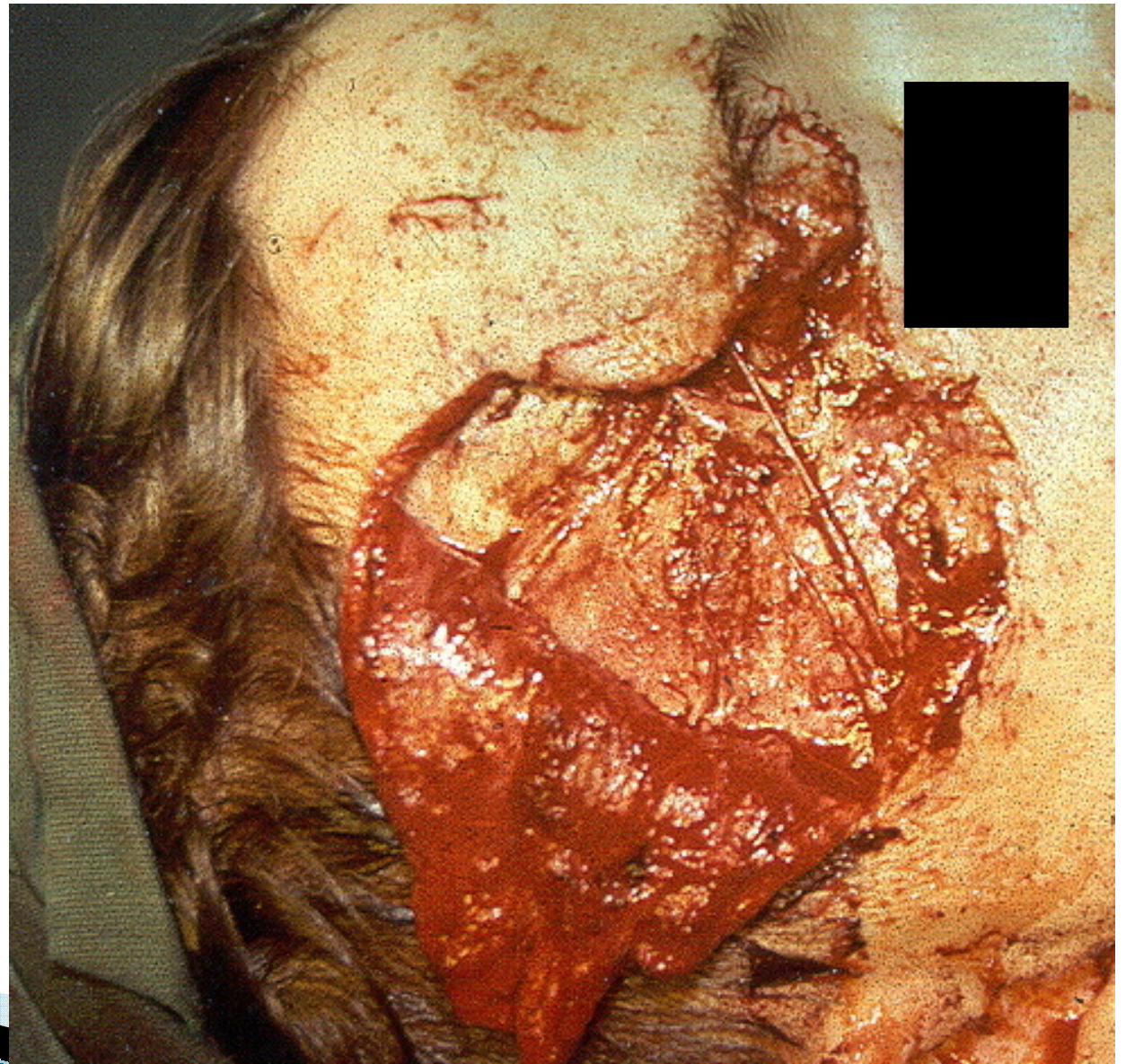
# Dento-alveolar

- ▶ Account
  - ?Airway
  - Store – Milk
- ▶ Replace
- ▶ Stabilise
  - Alfoil
  - Essig Splint
  - Arch bar
- ▶ Refer



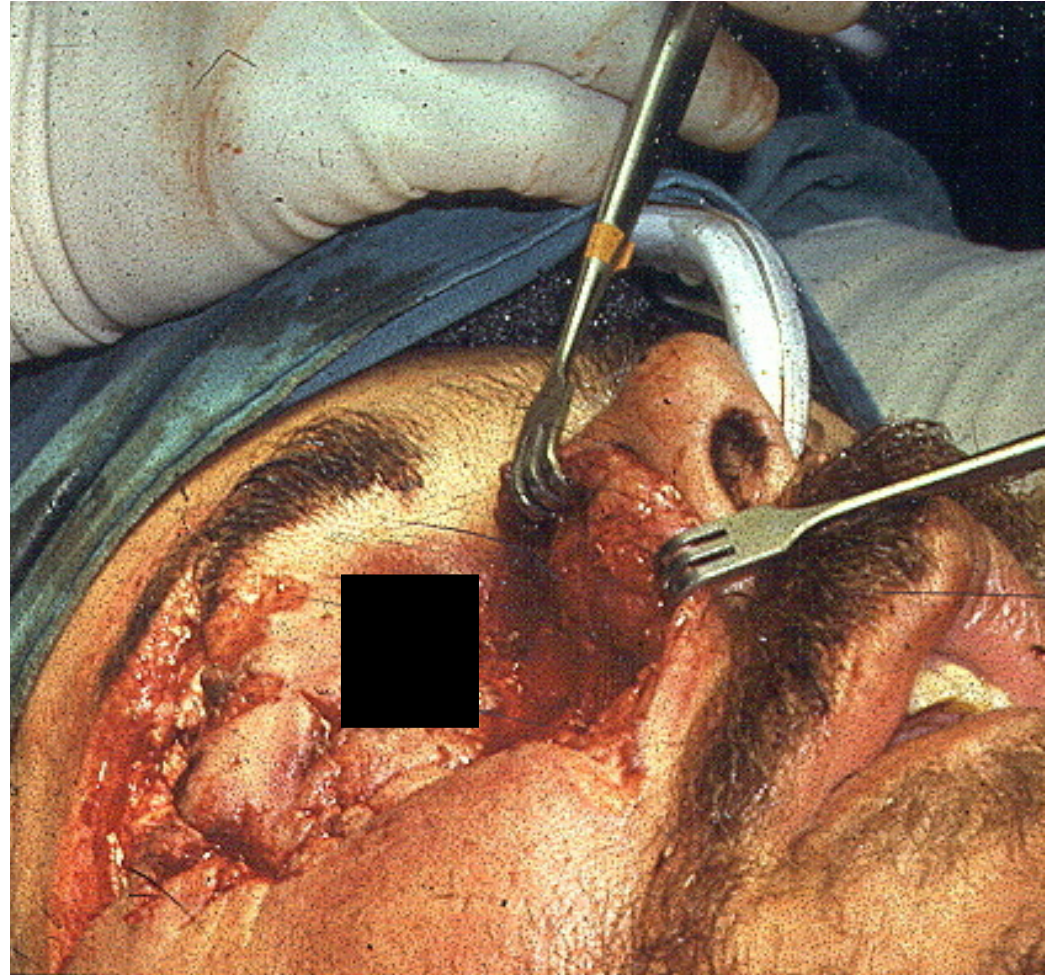
# Nerves

- ▶ Explore
- ▶ Repair
- ▶ Graft
- ▶ Tag
- ▶ Refer

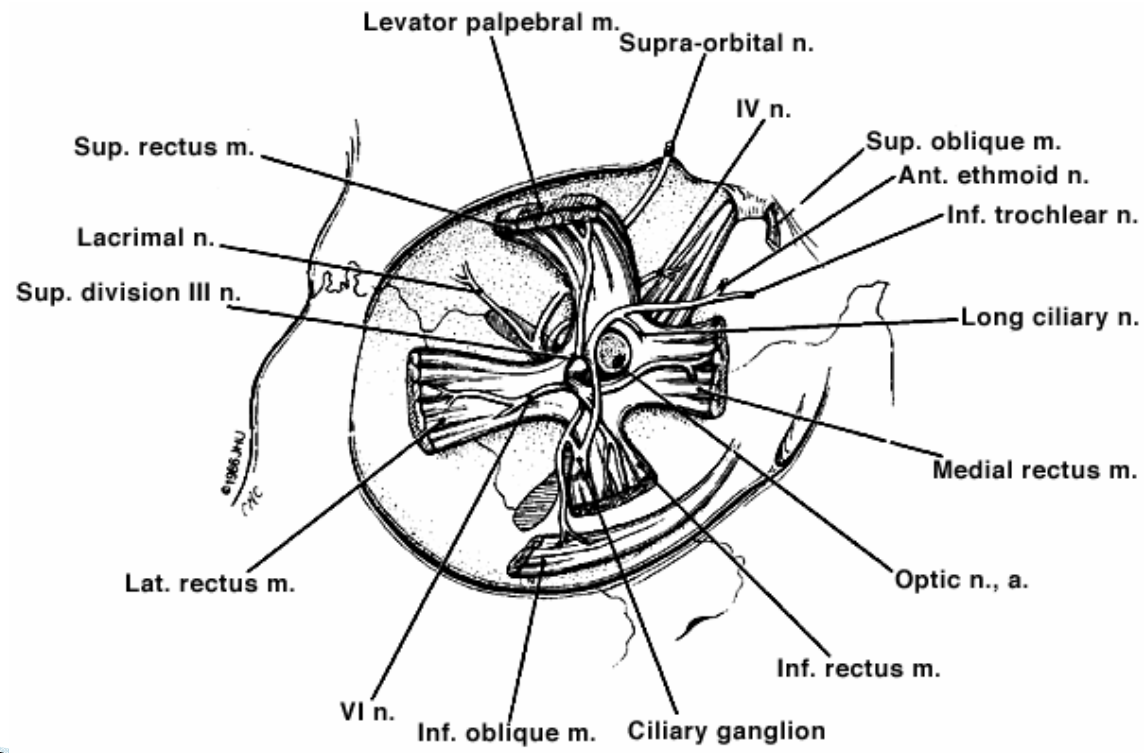


# Globe

- ▶ Urgent Assessment
- ▶ Consult
  - Hyphaema
  - Retina
- ▶ Apex Damage
  - Retinal Vessels
  - Fissure







# Ducts

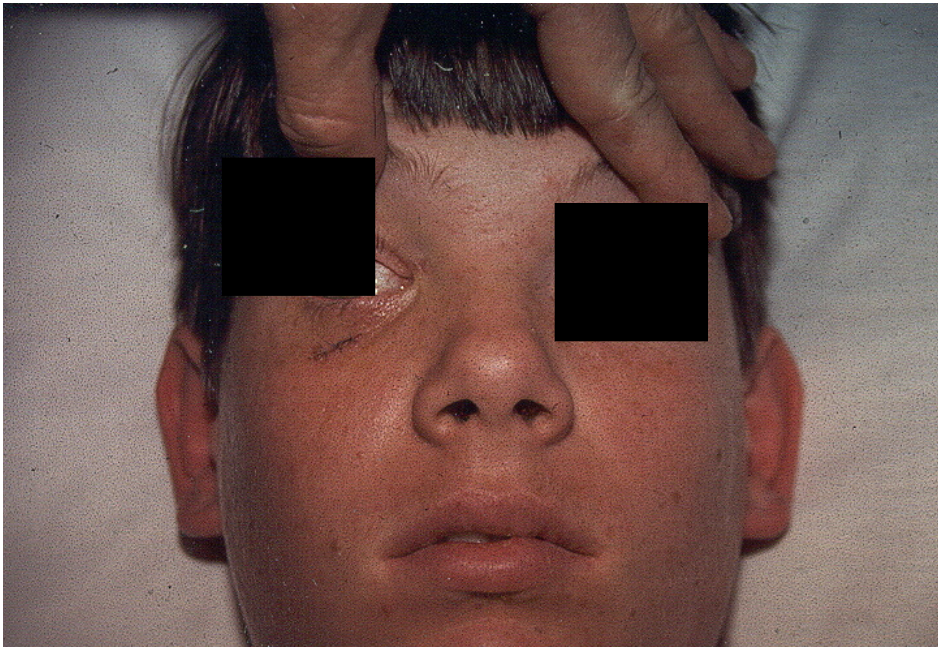
- ▶ Probe
- ▶ Intubate
- ▶ Repair
- ▶ Tag
- ▶ Refer
- ▶ DCR



# Orbital

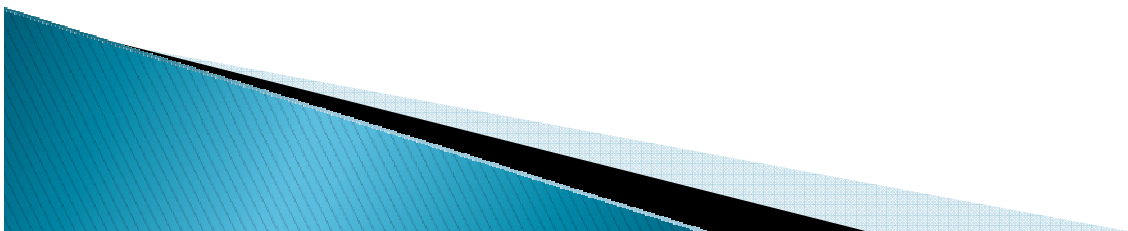
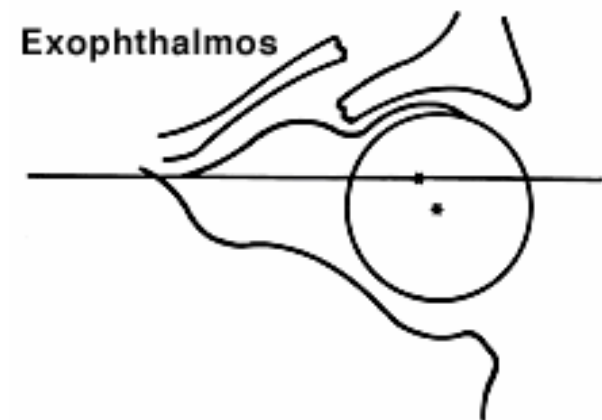
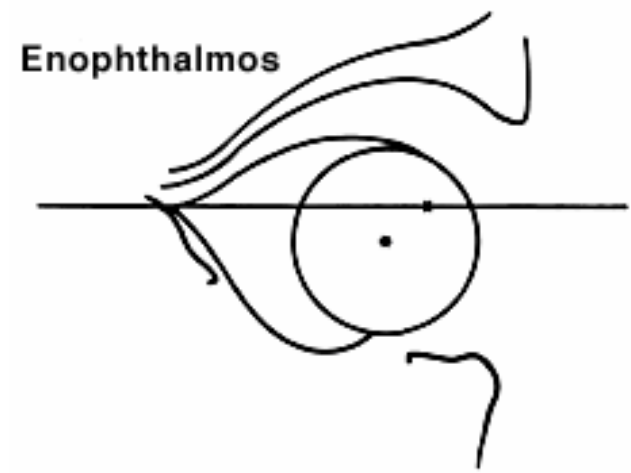
## ▶ Blowout

- Ophthalmoplegia
- Enophthalmos
- Forced Duction



# En / ExOphthalmos

- ▶ The Floor is not Flat
- ▶ Dystopia of Globe
- ▶ Globe Rotation

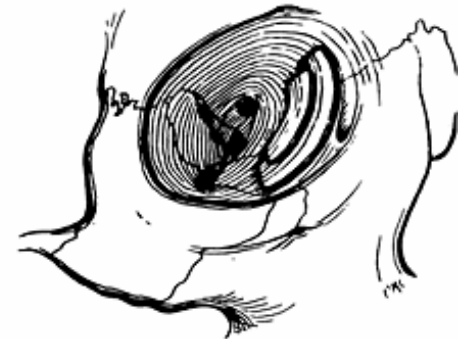


# Blowouts

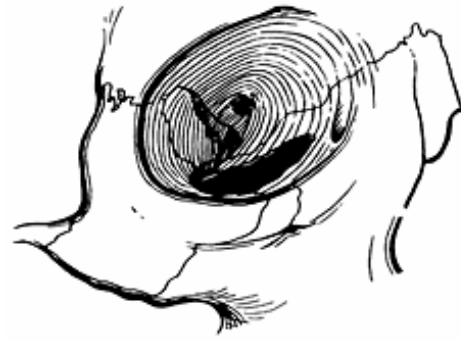
- ▶ Medial Wall
  - ^Enophthalmos
  - MR Entrapment
  - ~LR Paresis
- ▶ Floor
  - IR Entrapment
  - Poor Up Gaze



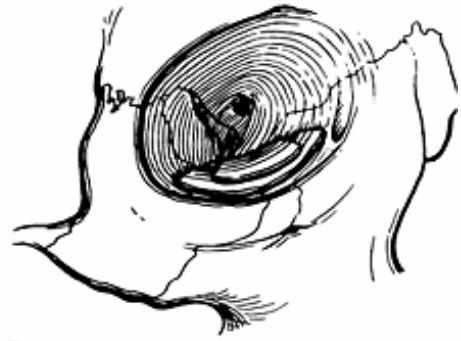
A



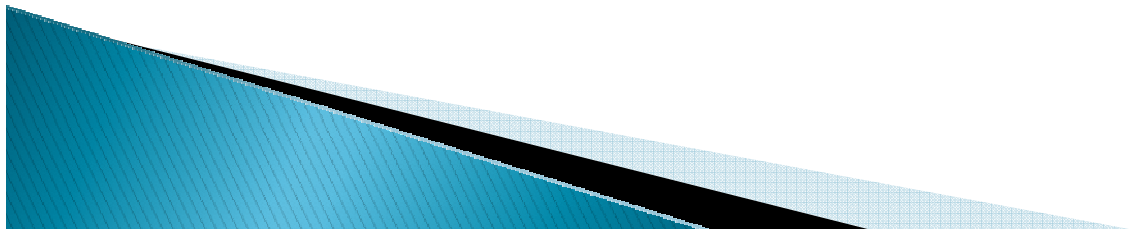
B

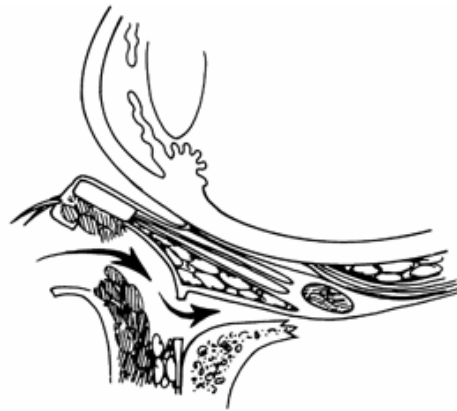


C



D

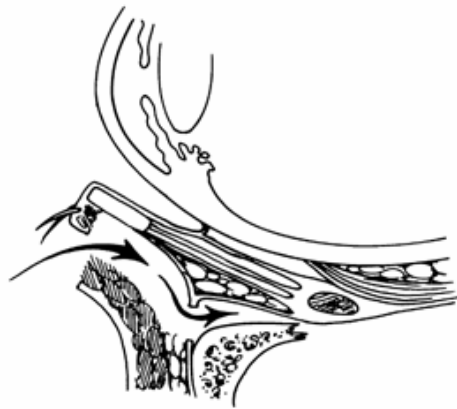




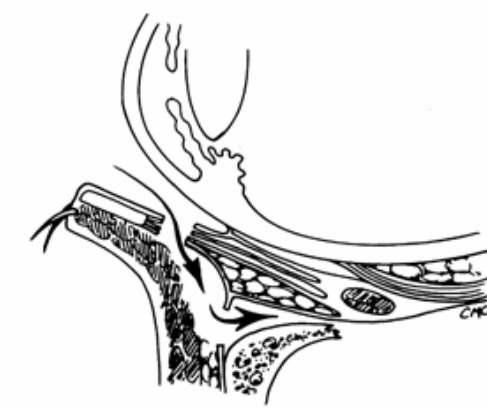
A



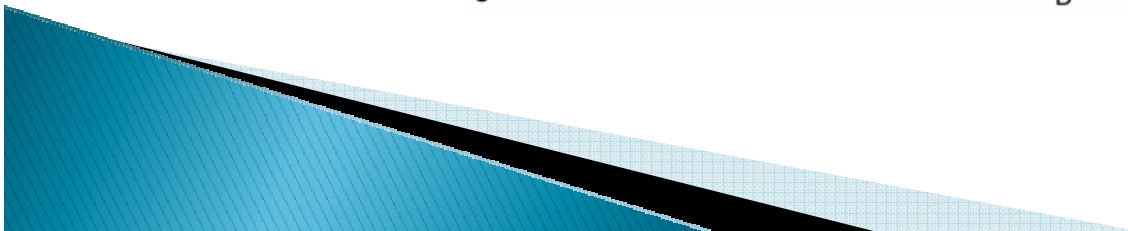
B



C

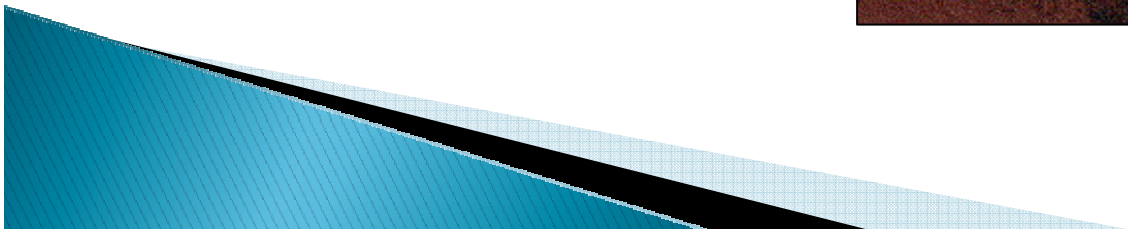


D



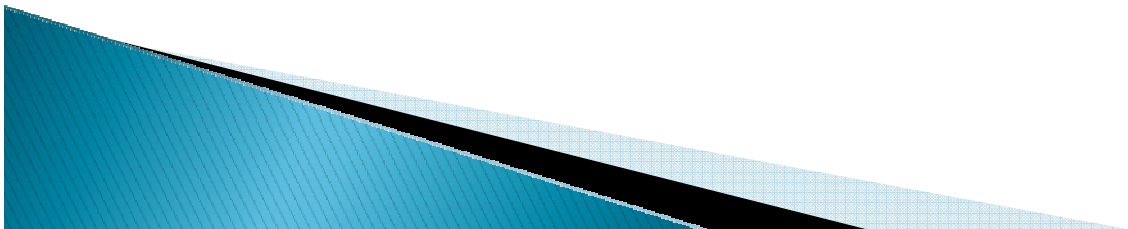
# Skin

- ▶ Simple
  - Repair
- ▶ Complex
  - Explore
- ▶ Loss
  - Replace
- ▶ Tattoo
  - Debride



# Skeleton

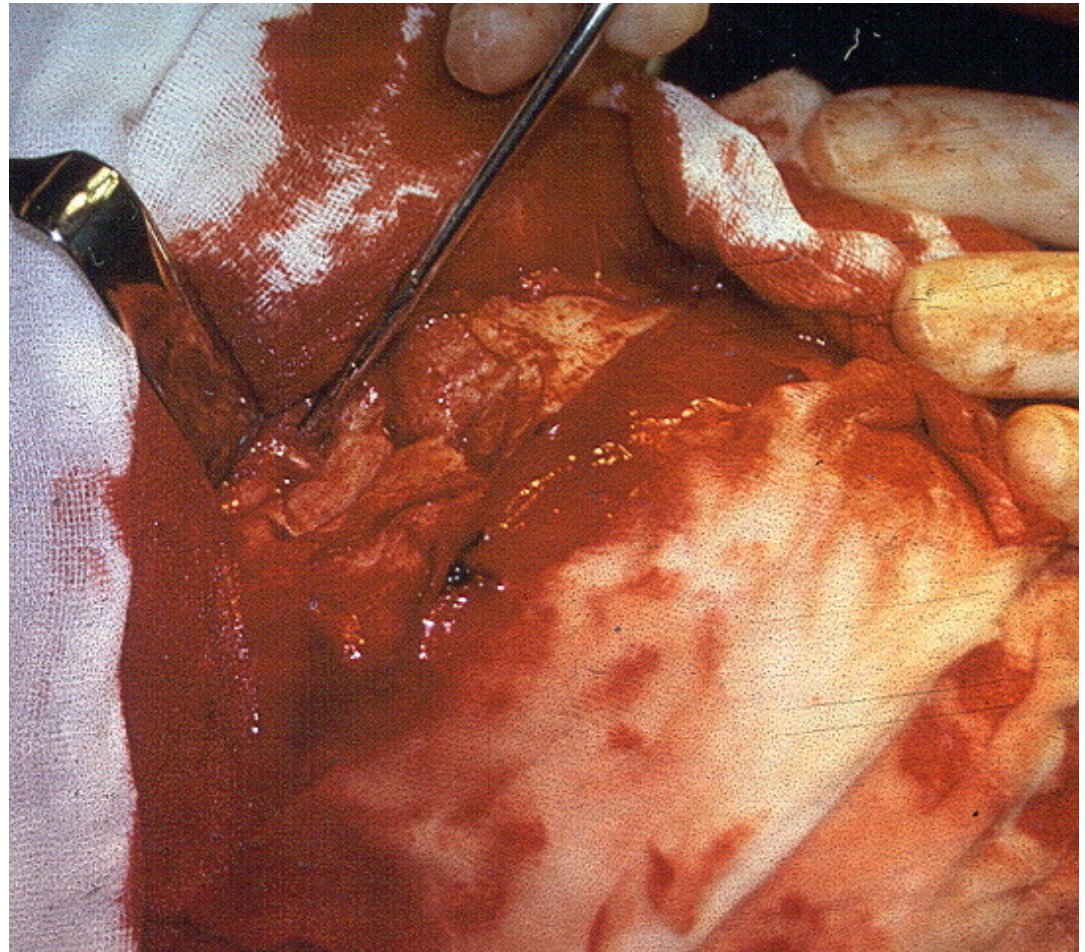
- ▶ Skull
- ▶ Zygomatico-orbital
- ▶ Nasoethmoidal
- ▶ Maxillary
- ▶ Mandibular
- ▶ Spinal
- ▶ Complex





# Frontal Fractures

- Expose
  - Direct Lacerations
  - Coronal
- Reduce
  - Gentle In-situ
  - Extracorporeal
- Fix
  - Sutures
  - Wires
  - Plates
    - Resorbable
    - Low profile Ti

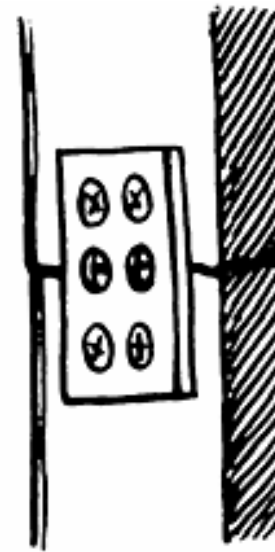




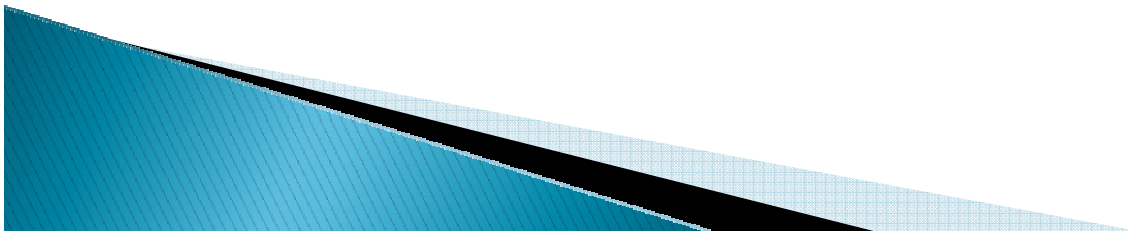
A



B

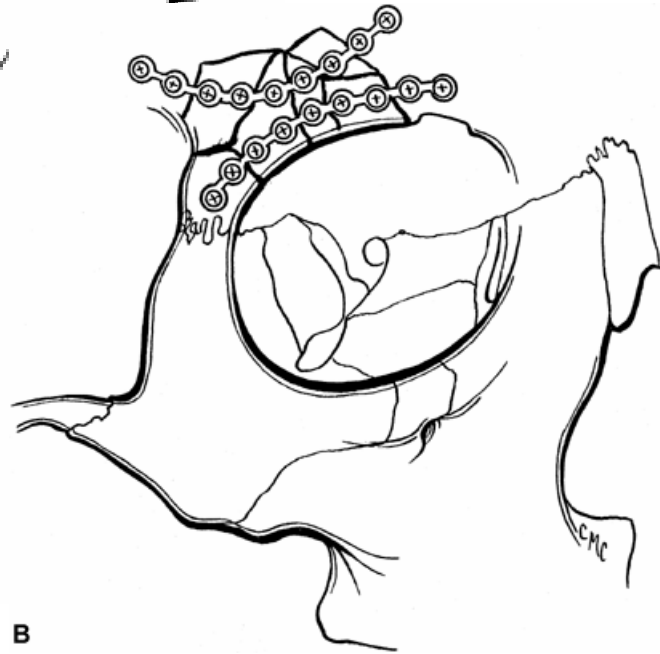


C





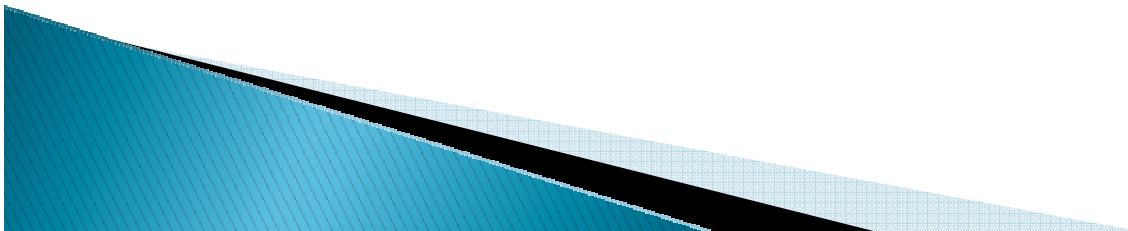
A



B

# Conclusions

- Head And Neck Trauma Is Often Complex And Requires Well Co-ordinated Multidisciplinary Management
- Optimal Management Initially May Reduce The Need For More Difficult Secondary Reconstruction



# Cranio-Maxillofacial 2012

## Snow workshop

*Queenstown 13-14 July 2012*



THE AUSTRALIAN & NEW ZEALAND SOCIETY  
OF CRANIOMAXILLOFACIAL SURGEONS



Course will extensively cover the syllabus for CMF for Plastic & Reconstructive Surgery

-will include many topics examined in previous short and long cases



# Venue – Hilton Queenstown



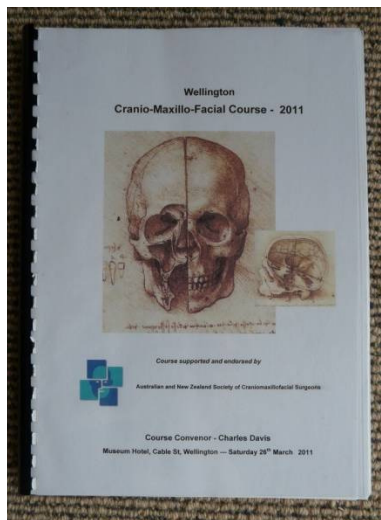
- ▶ Close to several ski-fields
  - Cardrona
  - Coronet Peak
  - Treble Cone
  - Remarkables

Ideal venue to bring your family and enjoy



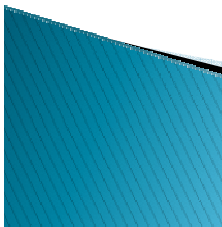
# Registration

- ▶ Course numbers limited, first come–first served
- ▶ Course program and details at [www.anzscmfs.co.nz](http://www.anzscmfs.co.nz)



Participants receive 200 page book summarizing course content

THE AUSTRALIAN & NEW ZEALAND SOCIETY  
OF CRANIOMAXILLOFACIAL SURGEONS



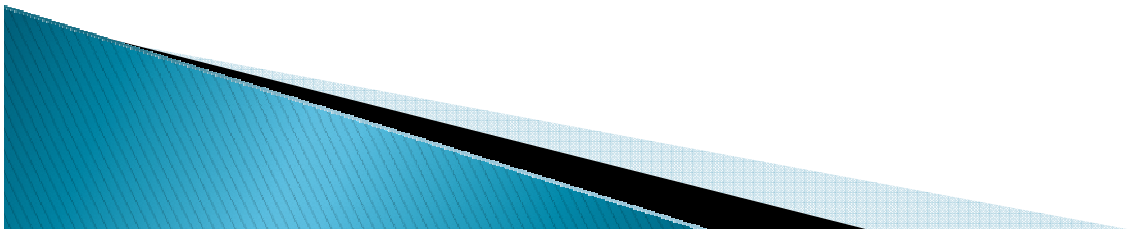


# “Study break”!



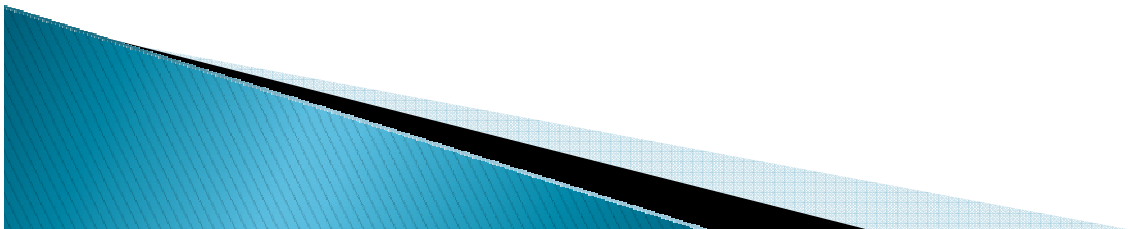
# Cranio-Maxillo-Facial 2012 – AGENDA

- ▶ Hilton Queenstown, 13–14 July 2012
- ▶ *Friday 13 July* 0800 Registration
- ▶ 0830      Session 1. Dental anatomy and CMF development
  - Dental anatomy, terminology and notation
  - Mandibular biomechanics
  - Occlusion
  - Dental embryology
  - Jaw cysts and tumours
  - CMF embryology
  - Cranial vault, skullbase & mandible development
  - Cranial bifidum and Parietalia foramina magna



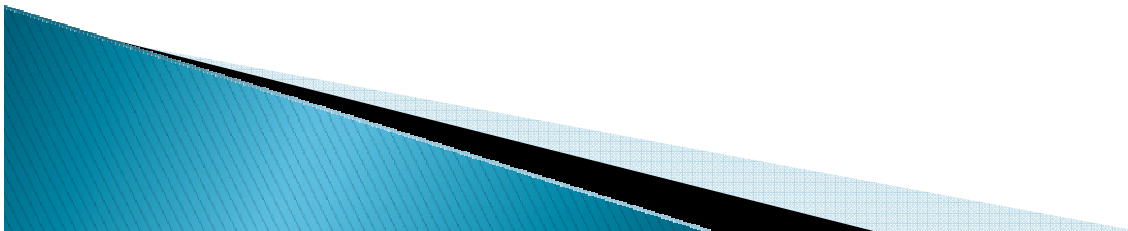
# 1100 Session 2 – Orthognathic Surgery

- Aesthetic Facial analysis
- Cephalometric analysis (practical)
- Dental impressions, wax bites, stone models, wafers (practical)
- Facebow transfer and articulators
- Model surgery
- Orthodontics
- Dental and CMF radiology
- Orthognathic Surgery
- Sagittal split, Le Fort I, Genioplasty (practical)



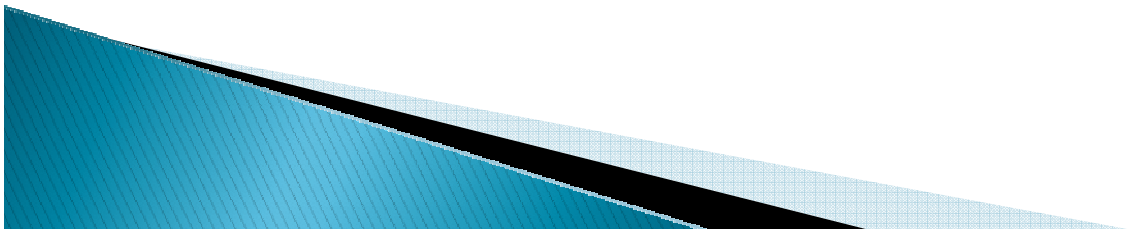
# 1400 Session 3 – Clefts

- Cleft anatomy, pathophysiology, epidemiology, prenatal diagnosis
- Nasoalveolar moulding
- Unilateral and bilateral lip repair
- Palate repair
- Speech assessment
- Velopharyngeal surgery
- Alveolar bone grafting
- Cleft rhinoplasty
- Craniofacial clefts



# 1600 Session 4 -Cranio-orbital conditions

- Hypertelorism
- Vertical orbital dystopia
- Graves disease
- Encephalocoeles
- Holoprosencephaly
- Fibrous dysplasia
- 



# 1700      Session 5 – CMF surgery principles and technologies



- Skull base access
- Bone healing and bone grafting
- Wires, Rigid fixation, Absorbable plates
- Transnasal canthopexy
- Submental intubation
- Orbital tissue expansion
- Osseointegration and Implantology
- Distraction osteogenesis
- Springs
- Cranioplasty alloplasts
- Bone substitutes
- Computer modelling

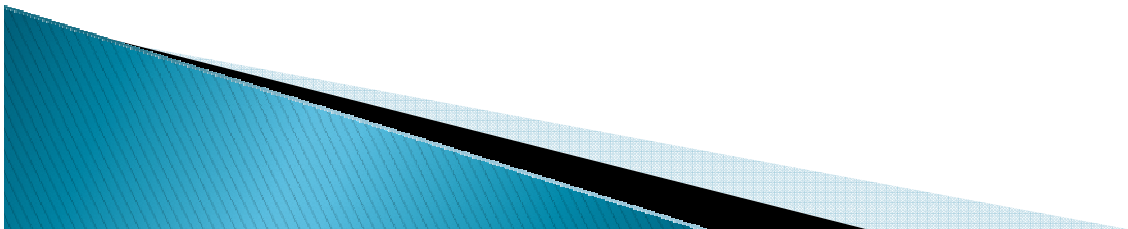
# *Saturday 14 July 0830* Craniosynostosis

- Cranial suture development and function
- Craniosynostosis; Classification, aetiology, genetics, consequences
- Sagittal, Metopic, Coronal, Lambdoid, Sphenoid synostosis
- Craniosynostosis syndromes: Apert, Crouzon, Pfeiffer, Muenke, Saethre Chotzen
- Craniofrontonasal dysplasia
- Cleidocranial dysostosis
- Oxycephaly, pansynostosis and Kleeblattschadel
- Intracranial pressure
- Obstructive sleep apnoea
- CSF flow dynamics and hydrocephalus
- Chiari and Dandy Walker malformations
- Deformational plagiocephaly
- Ventricular shunt deformities
- Principles of Craniosynostosis surgery
- Craniofacial osteotomies
- Le Fort III advancement and distraction



# 1100Session 7 – Craniofacial conditions I

- 
- Binder syndrome
- Pierre Robin sequence
- TMJ ankylosis
- Mandibulofacial dysostosis
- Treacher Collins syndrome
- Nager syndrome
- Hemifacial microsomia

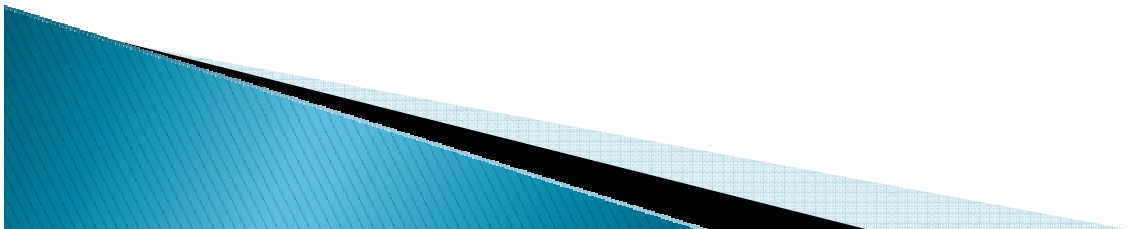




# 1330 Session 8 – CMF trauma

Mechanisms of injury and assessment

- Dental injuries
- Ocular injuries
- Cranio-cerebral injuries
- Skull base fractures
- Orbital fractures
- Zygomatic fractures
- Maxillary fractures
- Naso-orbito-ethmoid fractures
- Mandibular/ condylar fractures
- Post traumatic deformities
- Medial canthus injuries, canthopexy
- Mucocoeles
- Interdental wiring and maxillomandibular fixation (practical)



# 1600Session 9 – Craniofacial conditions II

- Microtia and ear reconstruction
- Facial Palsy
- Moebius syndrome
- Chin deformities
- Neurofibromatosis
- Rombergs Hemifacial Atrophy
- Dermoids
- Hemihypertrophy
- Proteus syndrome
- Beckwith–Weidemann syndrome
- Macroglossia
- Radiation induced deformities

