

Fractures and Assessment of the Injured Patient

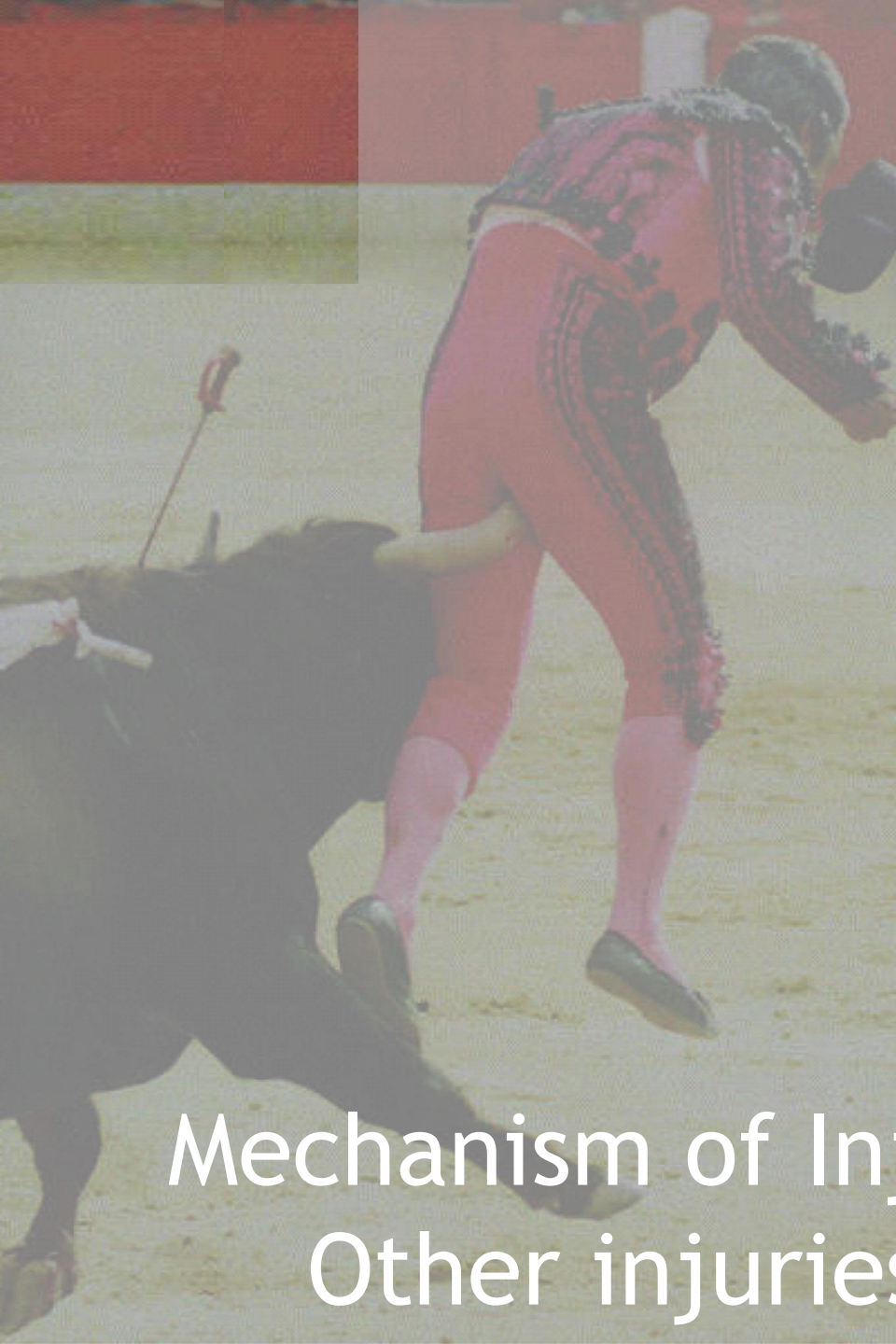
James Cunningham

Specialty Doctor in Oral and
Maxillofacial Surgery

Ulster Hospital

Aims

- Common facial fractures
- Signs of fracture
- Assessment (radiographs)
- Classification
- Management



Mechanism of Injury
Other injuries

Mandible



Mandible

Common signs and symptoms:

- Change in bite
- Restricted mouth opening
- Mobility
- Numb lower lip
- Sublingual haematoma

Mandibular views

Minimum 2 views at 90 degrees

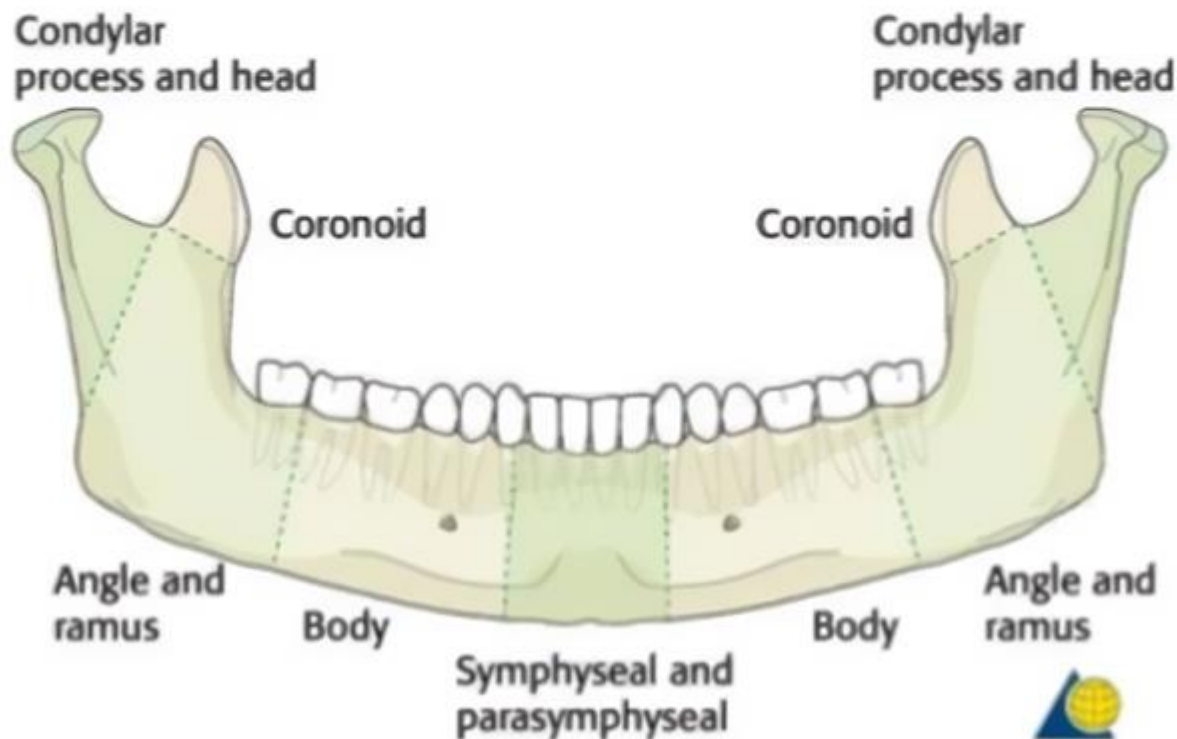
Must see condyles

Multiple fractures are common





CLASSIFICATION OF MANDIBULAR FRACTURES





IMF

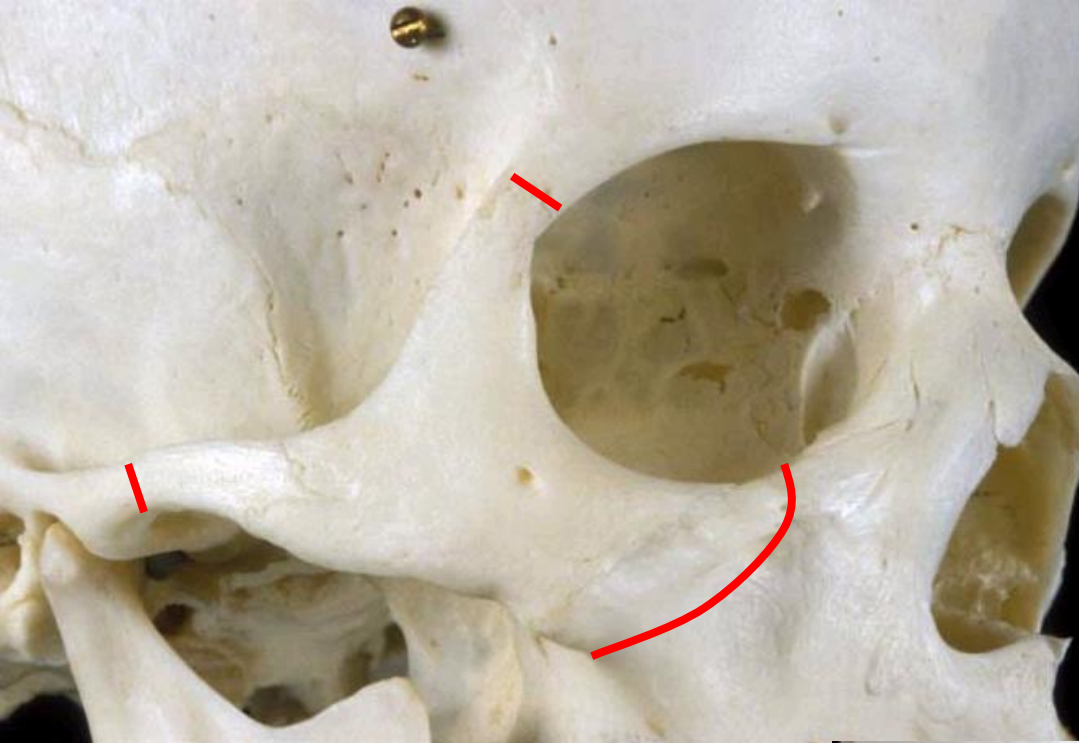
- Types of IMF
 - IMF screws (self tapping)
 - Arch bars
 - Hybrid IMF
 - PRB hooks
- Purpose of IMF is to hold bite in correct occlusion affording stability and bony healing

“Crumple zone”

Absorbs impact

Protects the brain



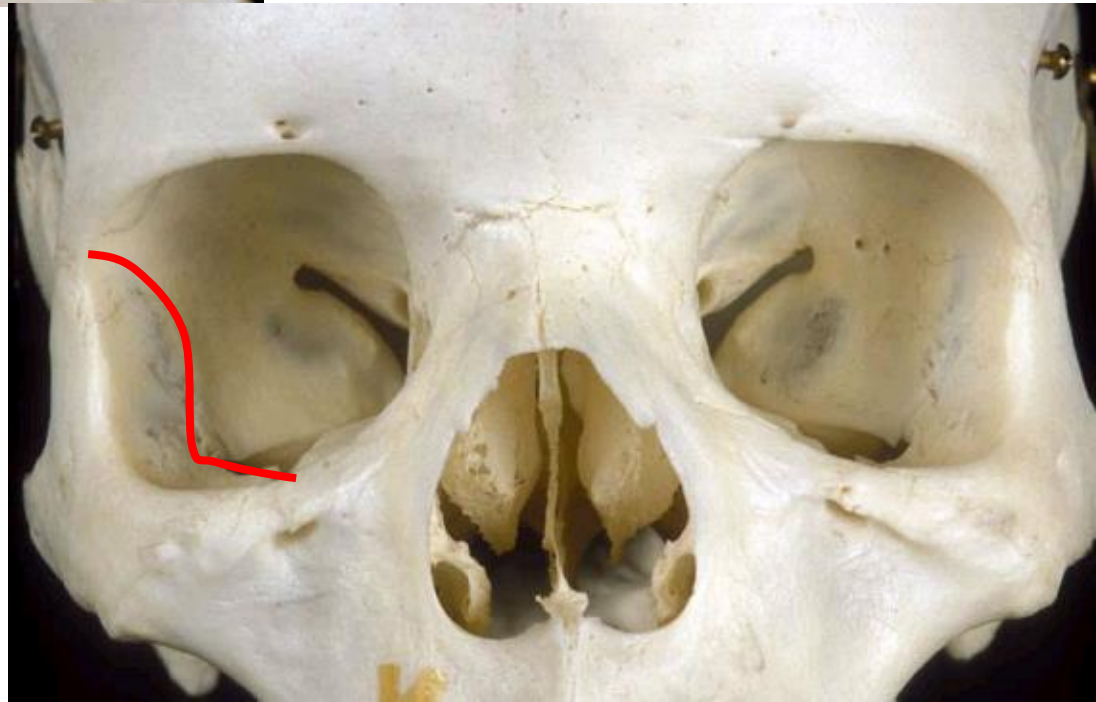


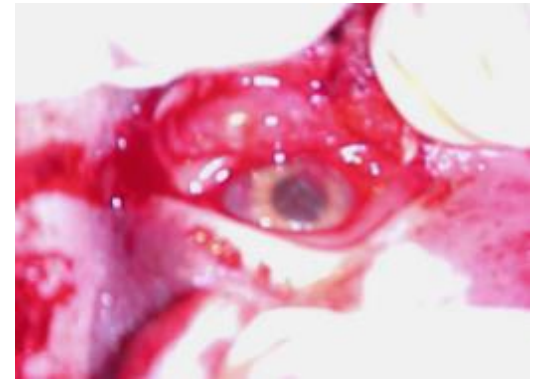
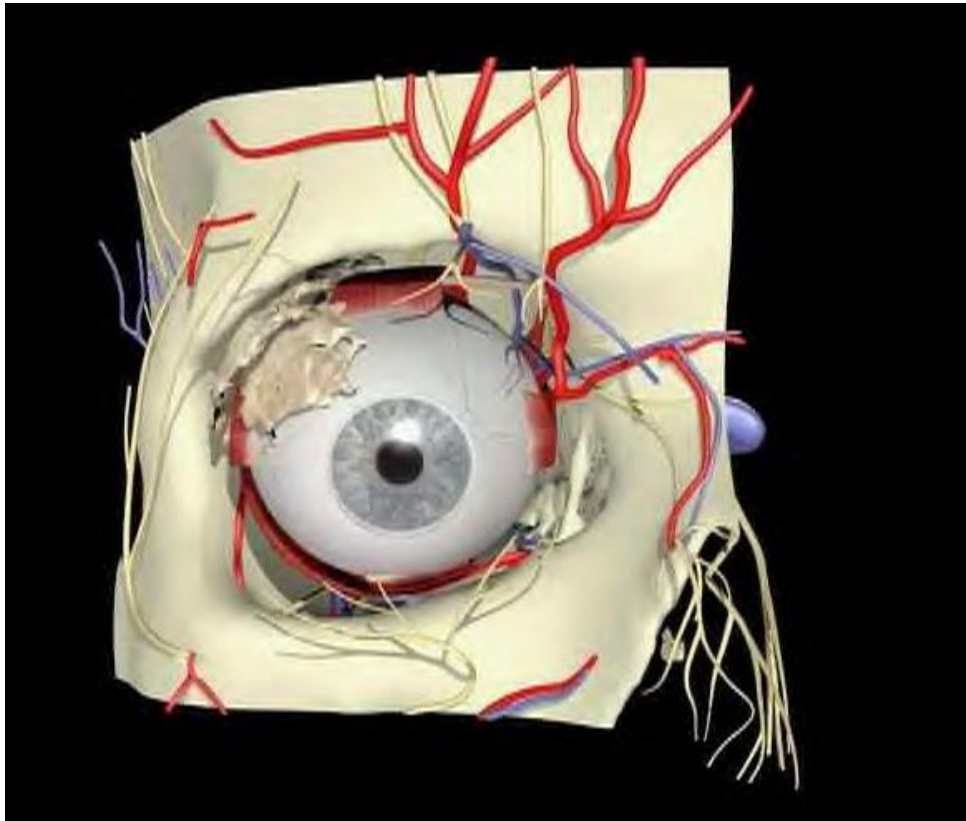
Zygoma

Malar

Tripod

Cheek





The eye takes priority

Function

Double vision

Eyelid support

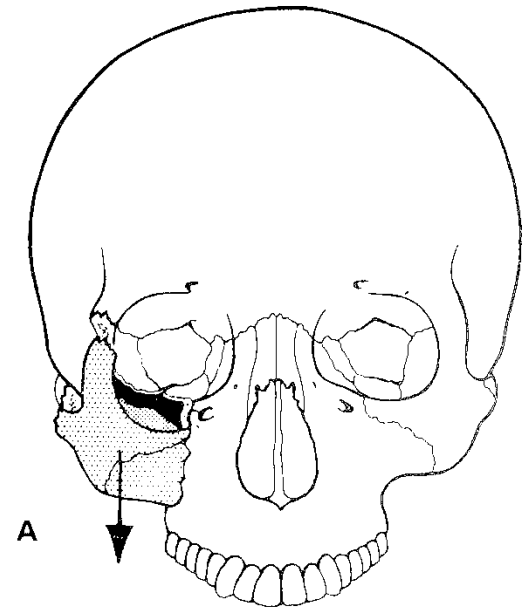
Numbness

Mouth opening

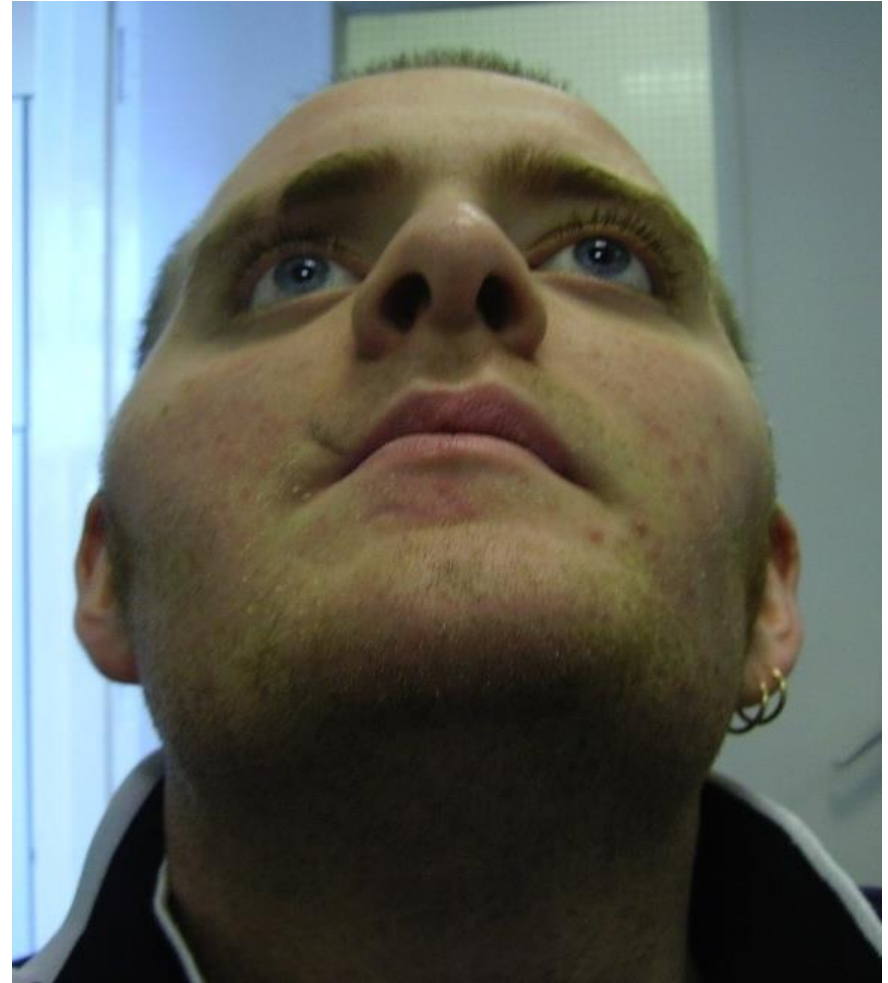
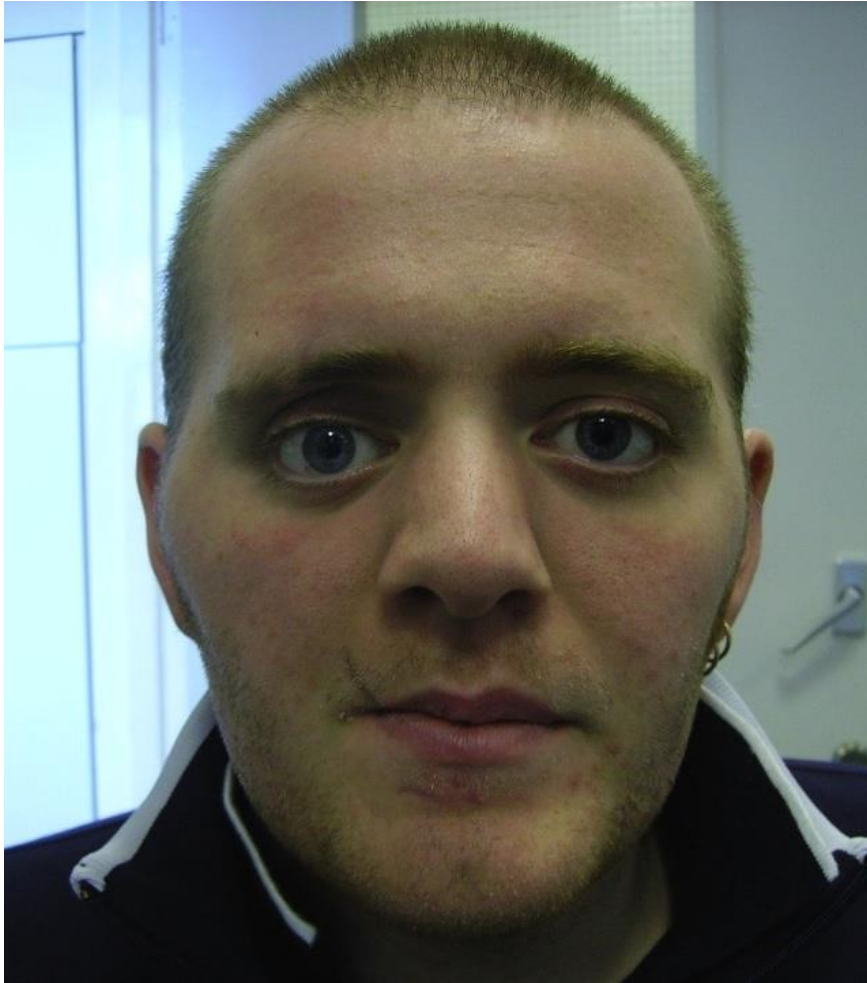
Cosmetic

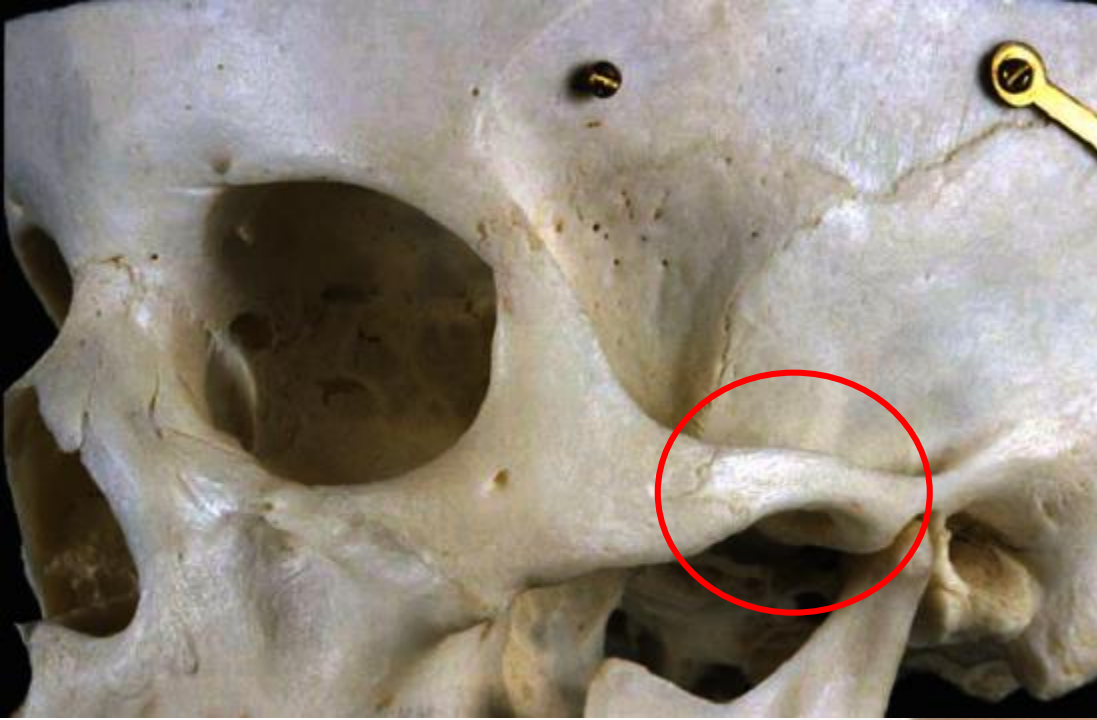
Cheek prominence

Appearance around the eye



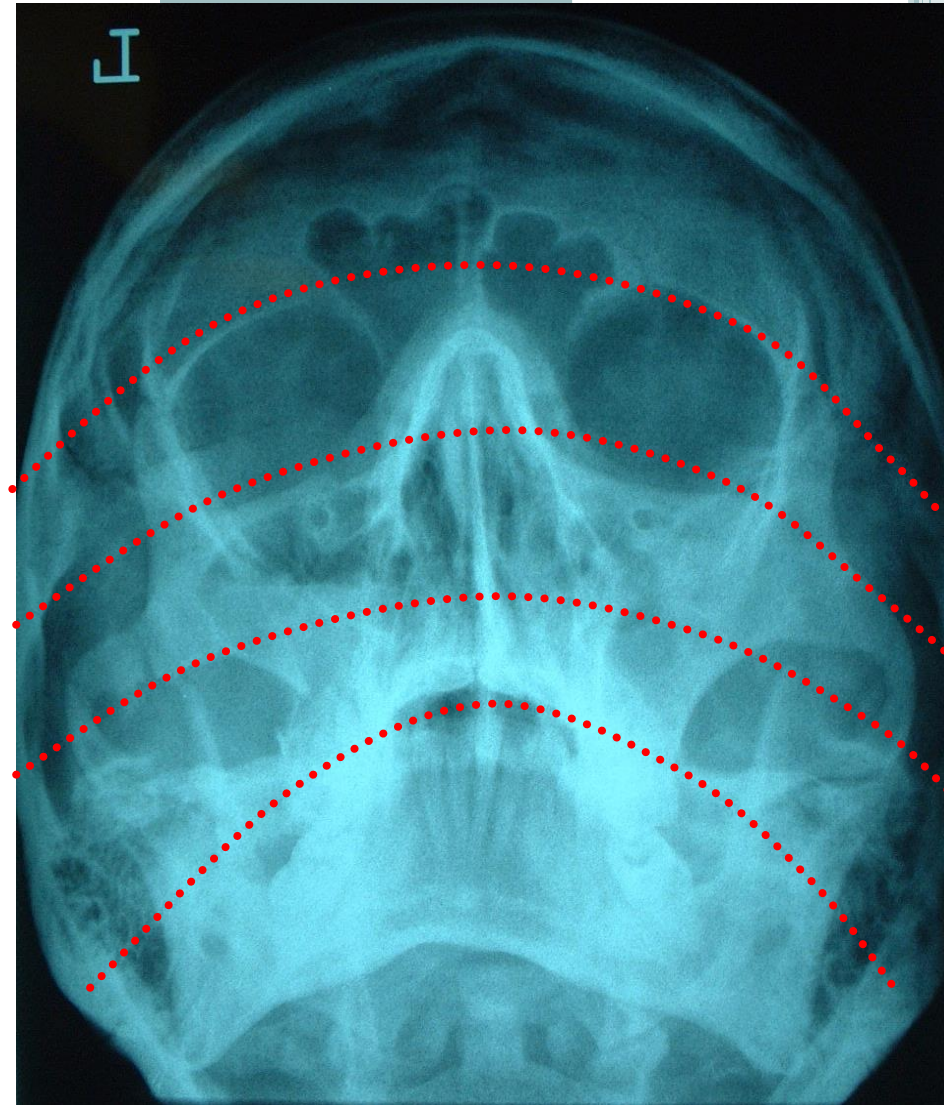
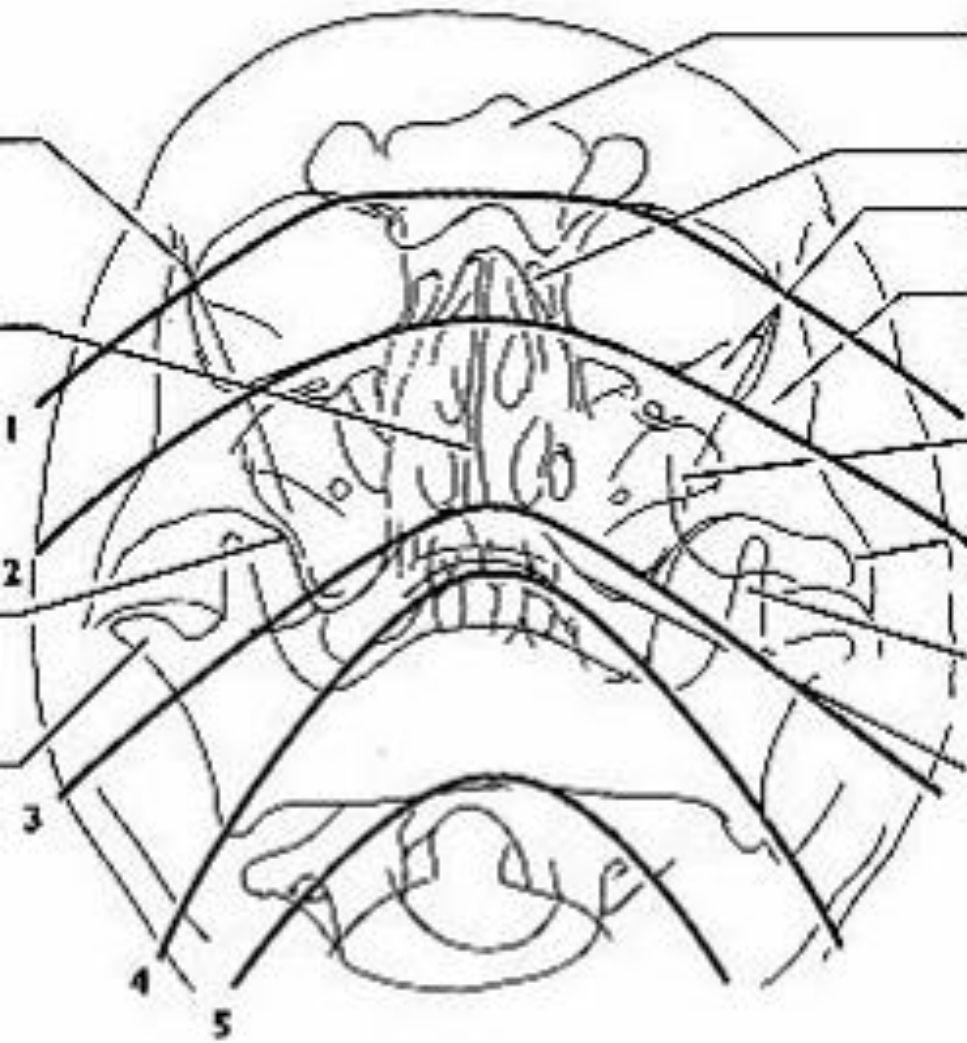
Untreated Zygoma



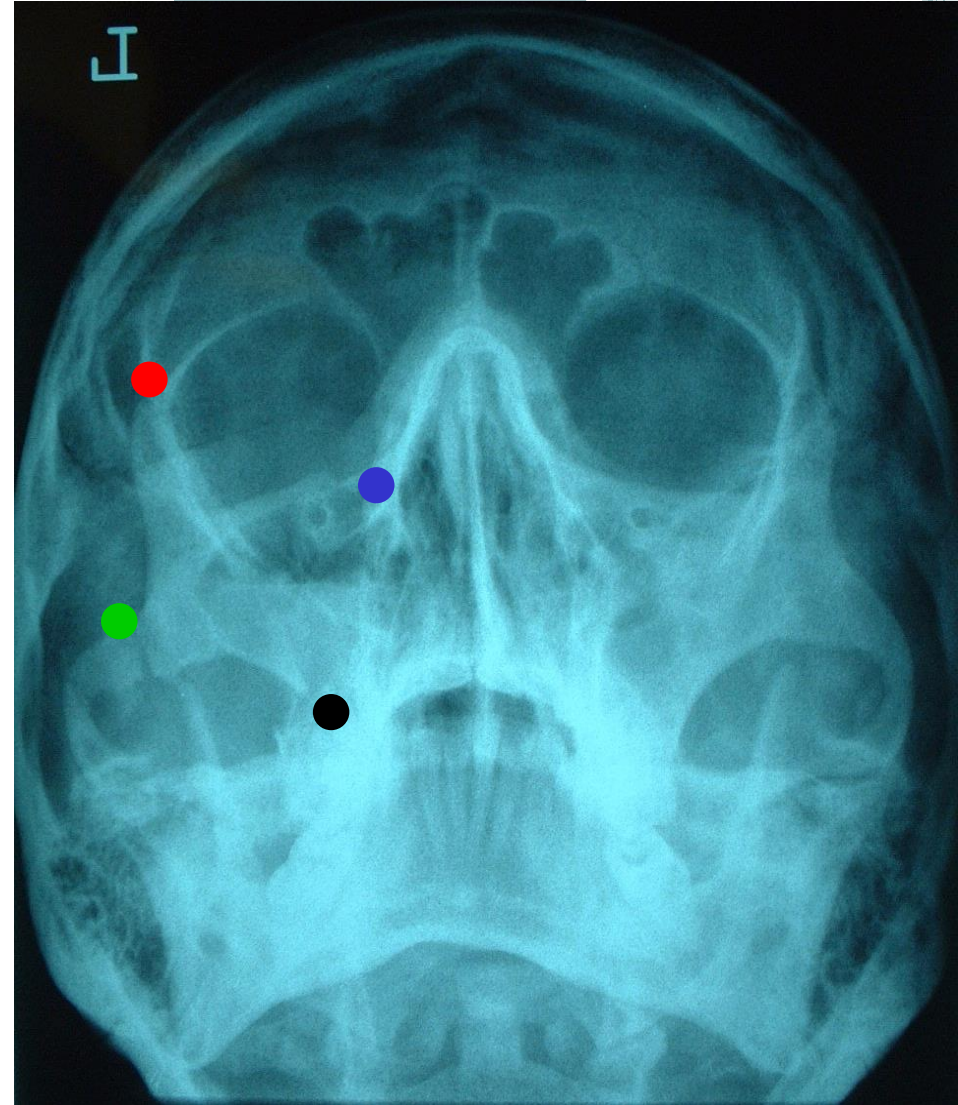
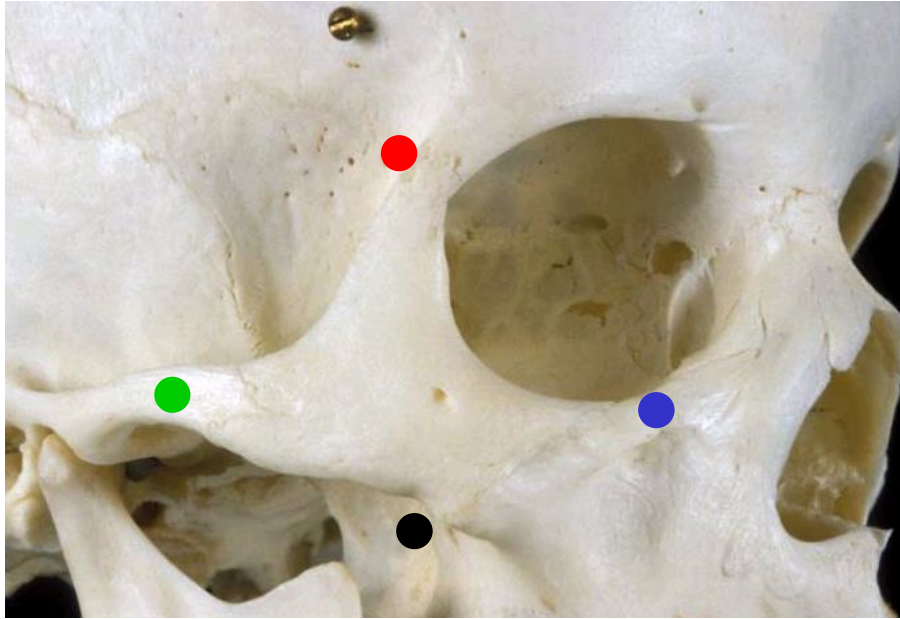


Zygomatic
arch

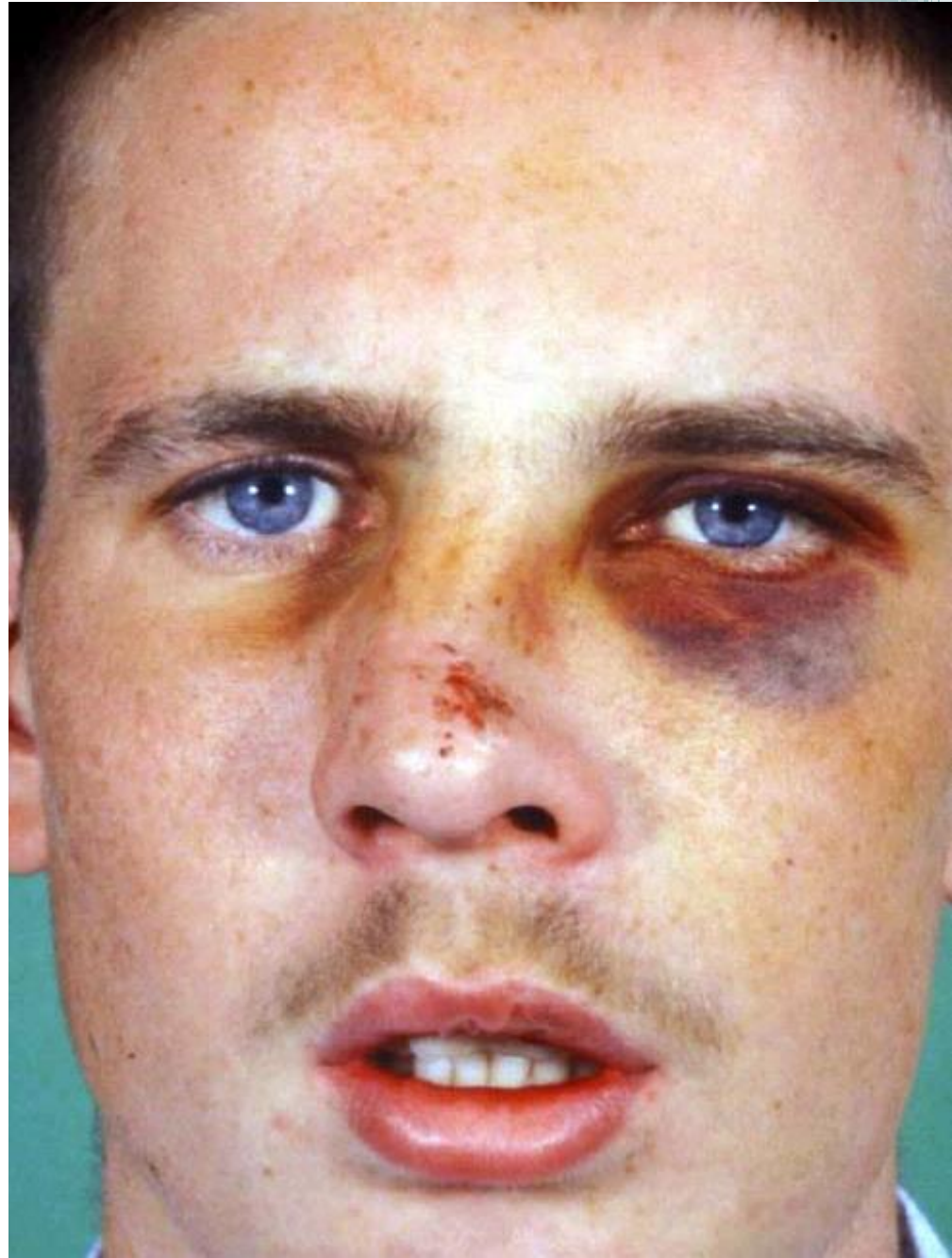




Campbell's lines



Nasal Bones



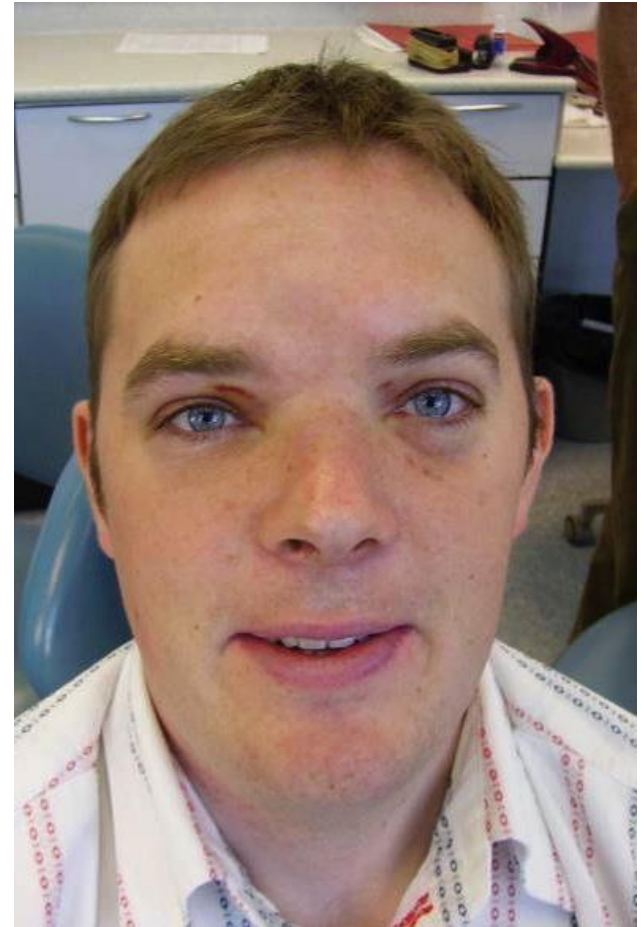
Just a broken nose? Consider...

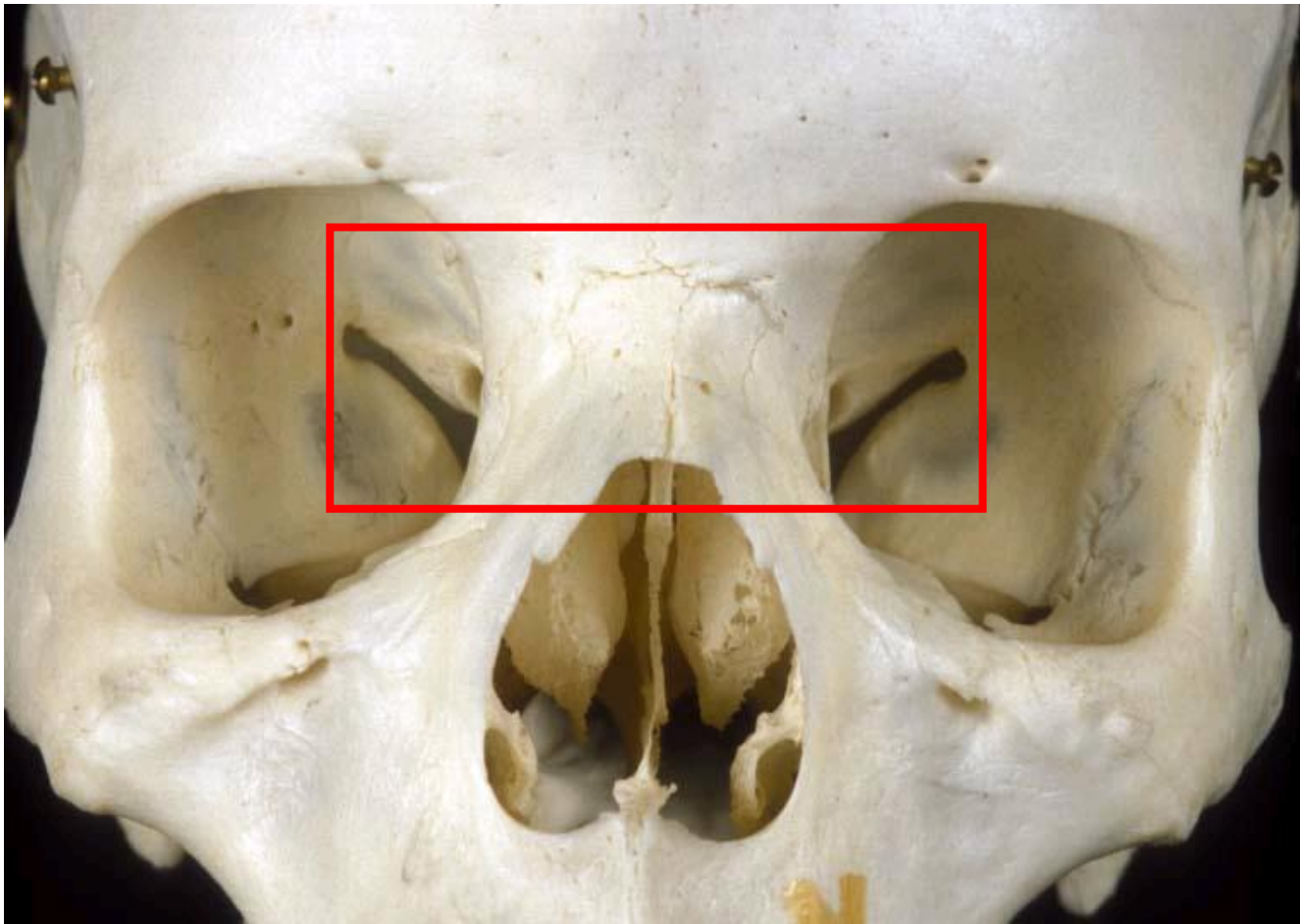
CSF leak

Vision

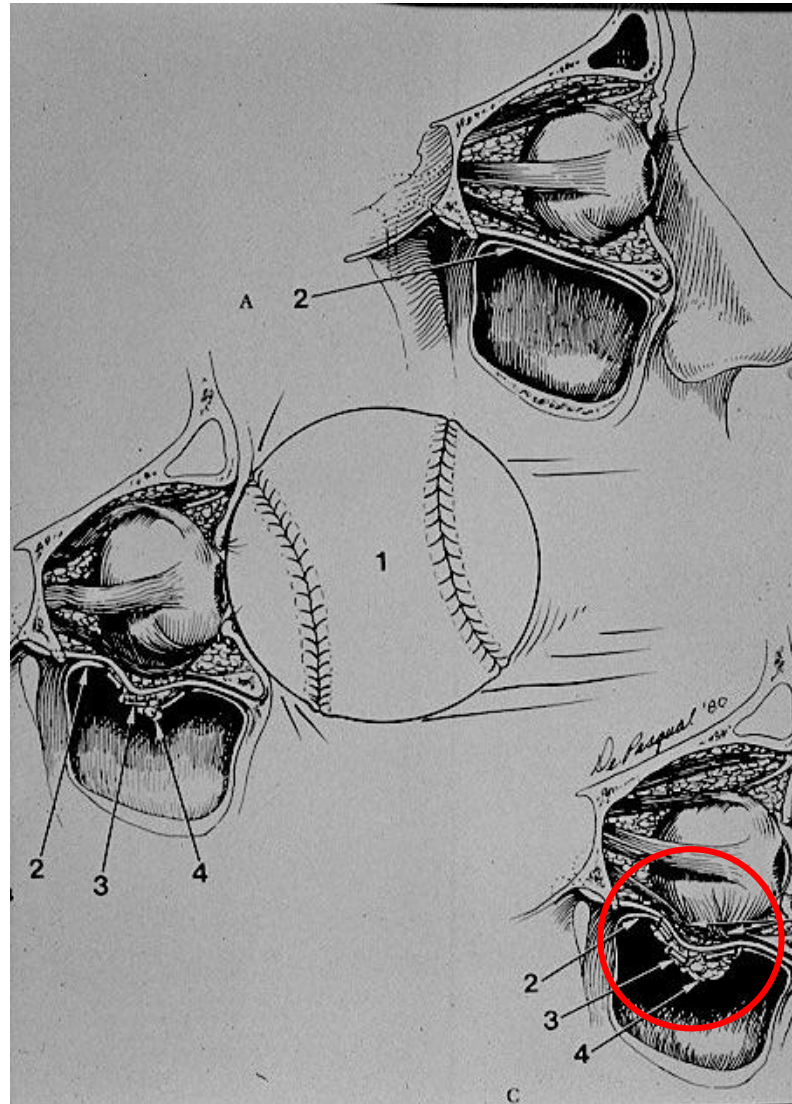
Septal haematoma

Intercanthal distance





Naso-orbito-ethmoid complex



“Blowout” fracture

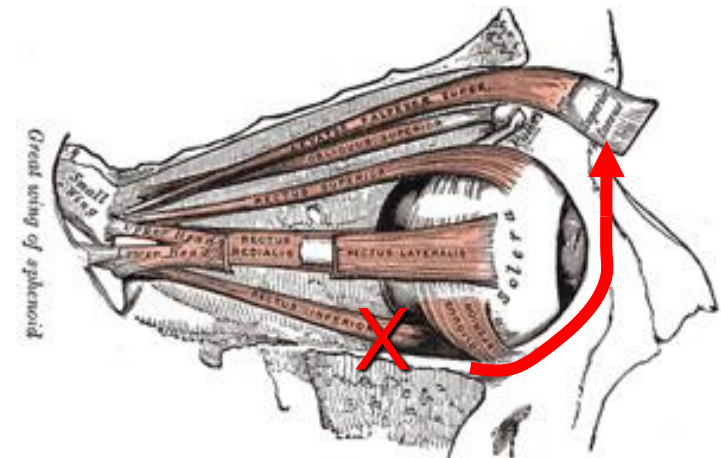
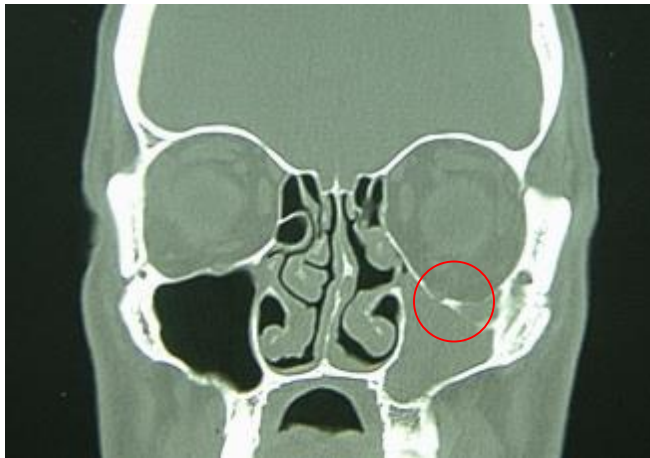
Clinical features

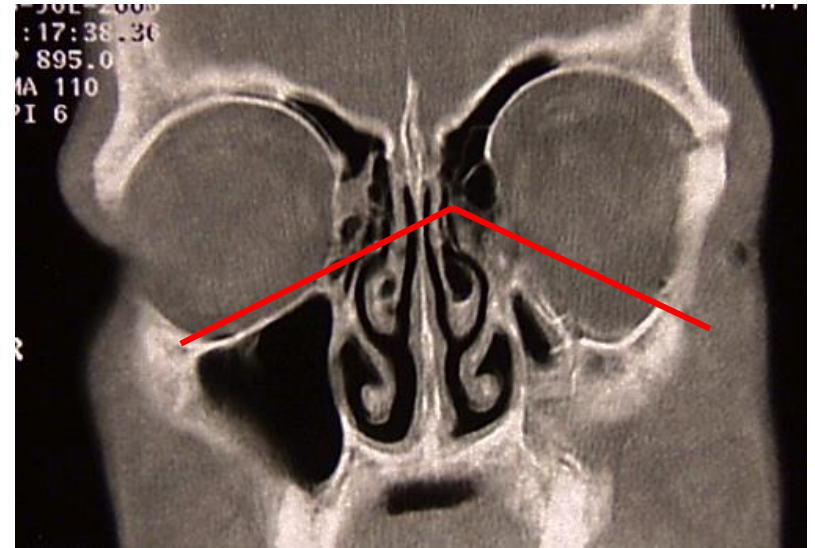
Change in position of the eye

Restriction of eye movement

Double vision

ALWAYS RECORD VISUAL ACUITY!!!



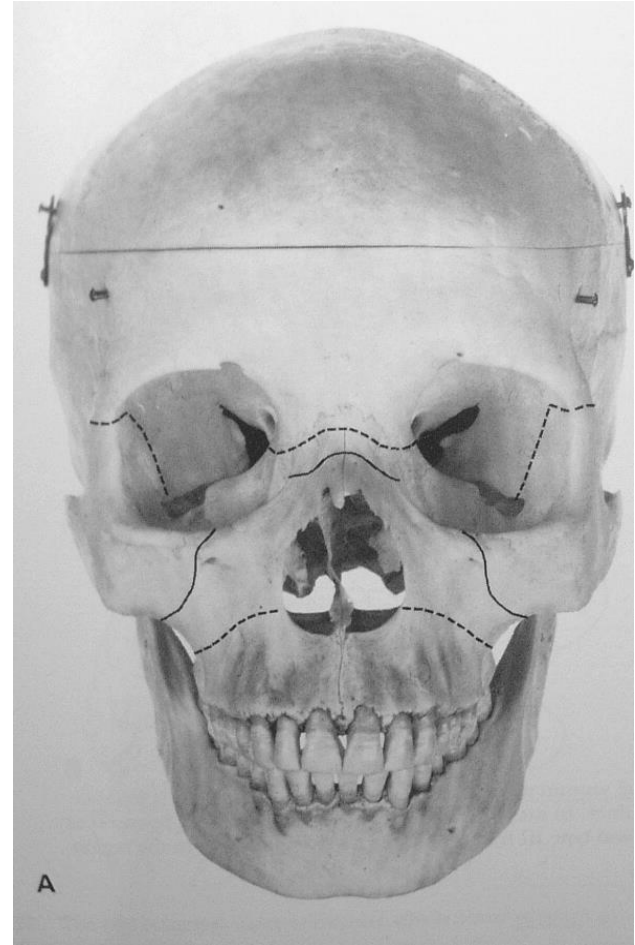


Enophthalmos/Hypoglobus
(volume)

“Tear-drop”



Le Fort (Midface)



Frontal sinus



Multiple fractures



Clinical Assessment

- Rule out other injuries / more pressing issues
- Develop your own systematic examination and documentation process
- EPIC smartphrases useful to aid memory
- Practice +++ - trauma clinic, admitting patients, ED calls
- Learn from missed injuries - we have all done it

Clinical Assessment

- Orbital rims / Frontal region
- Eye movements / restriction
- Nose incl septum
- Arches
- Prominences
- Midface stability
- Mandible, TMJ, opening, lateral movements.
- Teeth, occlusion and oral mucosa

Helpful hints

- Look at CT scan in 3d - many fractures are clearly apparent. Can get caught out with orbital floors/medial orbits
- Read the CT report
- If in any doubt - ask for advice. Better to have a short delay than accepting a patient that you cannot manage, ie head injury, ruptured globe etc
- Try to improve your own ability to interpret scans - the ward round is a teaching event every day.