

MAXILLOFACIAL TRAUMA

The on-call maxillofacial surgeons can be contacted through the switchboard at the Southern General Hospital

Mandibular Injuries

Mechanism of injury

Assault, falls, RTA-Direct trauma to mandible

Associated Injuries

Local
C-spine
Chest/abdomen

Symptoms & signs

Pain, swelling, limitation of jaw movement, malocclusion, altered sensation of mental nerve

Investigations

Radiographs in 2 planes

E.g OPG & PA mandible

Patient needs to sit still for a few mins for an OPG. Drink/uncooperative patients will be unable to get these x-rays. Overnight may get oblique laterals

Classification of injuries

Site

Condyle 32%

Angle 25%

Body 25%

Symphysis/canine 9%

Coronoid/alveolus/>2 sites 9%

37% bilateral

Remember mandible is a ring structure- usually breaks in 2 places

Typical patterns

Angle & contralateral condyle

Angle & contralateral body/anterior mandible

Body/anterior mandible & contralateral condyle

Anterior mandible & bilateral condyles

Management

41% treated conservatively

however all cases should be referred to the on-call maxillofacial surgeon urgently as specialist assessment is indicated unless undisplaced crack # with normal occlusion (usually condylar #)

analgesics

antibiotics Penicillin & Metronidazole

Maxillofacial SHO will decide if patient to be transferred to another hospital for admission

Danger Areas

Bilateral anterior mandibular # in unconscious/semiconscious supine patient

Middle cranial fossa injury mandibular condyle displaced posteriorly

Central Mid-face Injuries

Mechanism of injury

Significant blunt trauma to mid-face assaults, RTA

Associated Injuries

Skull
Neck
Chest
Abdomen

Symptoms & Signs

Gross swelling, panda eyes, long face, deranged occlusion, altered sensation
infraorbital nerves, mobile maxilla, palpable steps

Investigations

Radiographs: skull, c-spine, facial bones- occipito-mental views at 15 & 30 degrees
OPG, CT

Classification

Often difficult clinically
Le Fort I-III
Unilateral.bilateral
A&E diagnosis is of mid face #

Management

Clear & secure airway
Stop haemorrhage
Exclude other injuries
Urgent referral
Analgesics
Antibiotics
Admit

Danger Areas

Airway
Haemorrhage
Associated injuries
Head injury
Globe injury

Lateral Mid Facial Injuries (Malar/Zygomatic complex #s)

Mechanism of Injury

Blunt trauma to side of face or infra-orbital region
Assault, sports injuries, RTA & falls

Associated Injuries

Eye
Skull
Neck

Symptoms & Signs

Swelling, bruising, facial flatness, subconjunctival haemorrhage (no posterior limit)
altered infraorbital nerve sensation, palpable steps, limitation of jaw movement,
unilateral epistaxis. Restriction of eye movement, dystopia, enophthalmos & diplopia.

Investigations

Visual acuity
Fundoscopy
Radiographs-facial views

Classification

Type 1	undisplaced (any site)
Type 2	zygomatic arch only
Type 3	tripod FZ intact
Type 4	tripod FZ separated
Type 5	pure blow out
Type 6	orbital rim only
Type 7	comminuted

Management

Exclude eye injuries (& other injures)
Antibiotics (amoxycillin)
Contact the on-call maxillofacial SHO at the Southern General Hospital to arrange an
out-patient appointment.
Give patients copy of notes/x-rays & appointment time for the Southern General.
Advise no nose blowing & return if eye symptoms worsen.

Danger Areas

Eye injuries
Associated injuries

Orbital Blow Out Injuries

Mechanism

Direct blow to orbit e.g. squash ball, punch

Symptoms & Signs

Bruising, subconjunctival haemorrhage (No posterior limit) altered infraorbital nerve sensation, unilateral epistaxis. Restriction of eye movements, dystopia, enophthalmos & diplopia. Visual field changes

Investigations

Radiographs; occipito mental views CT axial & coronal

Classification

Floor
Medial wall
Lateral wall
Roof

Management

Exclude eye injuries (& other injuries)
Antibiotics (amoxycillin)
Next out-patient clinic follow up
Advise no nose blowing & return if eye symptoms worsen
If minimal swelling early referral may expedite treatment

Danger Areas

Eye injuries
Associated injuries

Naso-orbital-ethmoidal Complex Injuries

For isolated nasal injuries/# see ENT

Mechanism of injury

Significant blunt trauma to bridge of nose RTA, assault

Associated Injuries

Skull

Neck

Other facial bones

Chest

Abdomen

Symptoms & signs

Bruising, swelling, bilateral panda eyes, depressed nasal bridge, telecanthus, bilateral eye signs, epistaxis, CSF rhinorrhea

Investigations

Radiographs; skull, c-spine, OMS, lat facial bones, CT axial & coronal

Classification

#s involve one or both orbits, nasal bones & frontal sinus and or anterior cranial fossa

Management

Control haemorrhage

Exclude other injuries

Analgesics

Antibiotics

Admit

Urgent referral

Danger Areas

Haemorrhage

CSF

Globe injuries