

External Trauma to the Neck

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Introduction:

- ❖ Shift in Treatment Policy from MNE
- ❖ Effectiveness of initial management will determine final airway and voice.
- ❖ Airway is crucial
- ❖ Severe injuries to larynx rare
- ❖ See pt as whole

Mechanism

- ❖ Blunt vs Penetrating

Blunt trauma

- ❖ High speed MVA
- ❖ Strangulation
- ❖ Clothesline injury

Penetrating Trauma

- ❖ Stab wounds
 - Depth of wound often underestimated
- ❖ Gunshot wounds
 - Velocity of bullet

Consider associated injuries

- ❖ Oesophagus
- ❖ Vascular
- ❖ C-Spine
- ❖ Head Injury
- ❖ Peripheral nerve

Primary Survey: ATLS Principles

- ❖ Airway + C-spine control
- ❖ Breathing + Ventilation
- ❖ Circulation + Haemorrhage control
- ❖ Disability + GCS / AVPU
- ❖ Exposure + Environmental control

Airway Management

- ❖ Primary concern
- ❖ If unstable:
 - Intubation (ATLS)
 - NB: C-Spine and Laryngeal trauma
 - Tracheostomy : Preferred by ENT's

History:

- ❖ AMPLE
- ❖ History of event
- ❖ Hoarseness / Voice change
- ❖ Dysphagia
- ❖ Odynophagia
- ❖ Diff Breathing
- ❖ Ant. Neck pain
- ❖ Dysphagia / Odynophagia

Examination:

- ❖ Entire Head
- ❖ Pupils
- ❖ GCS + Cranial nerves
- ❖ CSF leaks
- ❖ Mouth
- ❖ C-spine
- ❖ Tenderness, Bruits, Deformity, Swelling, S Emphysema
- ❖ Tracheal deviation
- ❖ Suspect Pharynx/Larynx if:
 - Stridor
 - S Emph
 - Haemoptysis
 - Tenderness
 - Loss of prominence
 - Ecchimosiis
 - Oedema

Imaging

- ❖ Flexible endoscopy
- ❖ C-Spine XR
- ❖ Ba Swallow
- ❖ Angiography
- ❖ CT

Medical vs Surgical Mx

- Oedema
- Small Haematoma
- Small Lac
- Not inv Free margin VC
- Not inv Ant comm
- No exposed Cartilage
- Single non displaced thyroid cart #
- Lac Free margin VC
- Lac Ant Comm
- Mult. Displaced #'s
- Avulsed or dislocated arytenoids
- Vocal Cord immobile

Schaefer's Classification

❖ Group I

- Minor endolaryngeal lac or haematomas
- No #
- Min airway compromise

❖ Flex Scope / ??CT

Schaefer's Classification

❖ Group II

- Mod oedema
- Lac
- Mucosal disruption
- No exposed Cartilage
- Non displaced #'s
- Varying Airway comp

❖ Trache / ??CT

Schaefer's Classification

❖ Group III

- Massive oedema
- Mucosal disruption
- Displaced #'s
- Cord Immobility
- Varying Airway comp

❖ Exploration

Schaefer's Classification

❖ Group IV

- Two or more # lines
- Skeletal instability
- Significant comm trauma

❖ Exploration/ Stent

Surgical Mx

- Horizontal skin inc at cricoth mem
- Subplatysmal flaps
- Strap muscles
- Thyrotomy
- Laryngofissure via midline
- Inspect + repair
- Mucosal flaps prn
- Arytenoids
- Suspend VC to outer perichond
- Close thyrotomy

Special considerations /Controversies

- ❖ Time of surgery
- ❖ Airway management
- ❖ ORIF of #'s
- ❖ Repair of Rec. Laryngeal
- ❖ Paediatric injuries
- ❖ Laryngotracheal separation
- ❖ Complications

Patient example 1

Patient example 2

Patient example 3

Patient example 4

Patient example 5

Patient example 6



