The most common mechanism of blunt neck trauma is motor vehicle accident with rapid deceleration injuries or through direct blows against the steering wheel or dash.\(^1\) Strangulation from hanging, choking, clothes line injury or strangulation are not uncommon. Direct blows from fists, feet and other weapons account for the remainder.\(^1\)

**Spinal injuries** (addressed in Spinal Injury module)

Hangman’s # potential with judicial hanging (drop greater than patient’s height)

**Tracheolaryngeal injuries**

- Transections (76% within 2 cm of carina)\(^2\)
- Tears
- Contusion/oedema
- Cartilage fractures

Blunt tracheolaryngeal injuries are uncommon, ranging from contusion and mucosal oedema to tracheal tears and transections. 76% of tracheal transaction occurs within 2 cm of the carina. The primary issue in tracheolaryngeal injuries is airway compromise.

The mainstay of airway management where possible is to maintain spontaneous respirations until a tube is placed distal to the injury – ideally a tracheostomy under local anaesthesia performed in the operating theatre. **Fibre-optic laryngoscopy** is crucial to visualise the anatomy and to determine if there is any mucosal or cartilaginous injury.

**Vascular injuries**

- Dissection
- Thrombosis

Blunt vascular injuries involving the carotid or vertebral arteries are rare and clinical presentation is often subtle or non-specific. The likelihood of permanent neurological dysfunction is decreased if these are identified and treated early.\(^1\) Dedicated **CT angiogram of the neck** vasculature should be undertaken in patients with high risk features for blunt cerebrovascular injuries.

33% of C-spine fractures (excluding simple spinous process fractures) are associated with some form of vertebral artery injury. Most of these injuries are a result of the fracture site extending through the transverse foramen.

**High risk features for blunt cerebrovascular injuries**

- Severe hyperextension or flexion & rotation of neck
- Significant soft tissue injury to anterior neck
- C-spine #
- Seat belt sign across neck
- Unexplained neurological abnormalities
- Basilar skull # involving the petrous bone
References
