Face and Neck Injuries

Chapter 25
Anatomy of the Head

- CRANIUM
  - Frontal bone
  - Parietal bone
  - Temporal bone
- FACE
  - Orbit (eye socket)
  - Nasal bone
  - Zygoma
  - Maxilla
  - Mandible
  - Mastoid process
  - Temporomandibular joint
  - Cervical vertebrae
Landmarks of the Neck

- Thyroid cartilage
- Carotid arteries
- Sternocleidomastoid muscle
- Cricoid cartilage
- Cricothyroid membrane
- Trachea
Injuries to the Face

- Injuries around the face can lead to upper airway obstructions.
- Bleeding from the face can be profuse.
- Loosened teeth may lodge in the throat.
- If the great vessels are injured, significant bleeding and pressure may occur.
Soft-Tissue Injuries

- Soft-tissue injuries to the face and scalp are common.
- Wounds to the face and scalp bleed profusely.
- A blunt injury may lead to a hematoma.
- Sometimes a flap of skin is peeled back from the underlying muscle.
Hematoma

• Blunt injury that does not break the skin may cause a break in a blood vessel wall
Scene size up

- Take BSI precautions.
- Patients with facial bleeding may cough, projecting blood.
- Place several pairs of gloves in pocket.
- Look for bleeding as you approach.
- Consider spinal immobilization
Initial assessment

• Maintain patient airway.
• Do not insert nasopharyngeal airway if there is chance of basal skull fracture.
• Quickly assess chest for DCAP-BTLS.
• Place nonrebreathing mask over facial injuries; may be difficult but is important.
• Quickly assess pulse.
• Control life-threatening bleeding
Focused History and Physical Exam

• Rapid physical exam or focused physical exam depending on injury
• Use DCAP-BTLS to guide you to identify and correct threats to life.
• Do not focus only on bleeding.
• Obtain baseline vital signs and SAMPLE history
Interventions

- Complete spinal immobilization if spinal injuries suspected.
- Maintain open airway.
- Provide high-flow oxygen.
- May need assisted ventilation with BVM device.
- Control bleeding.
- Treat for shock if patient has signs of hypoperfusion.
- Do not delay transport.
- Complete detailed Physical exam if time allows.
• Reassessment is particularly important with face and throat injuries.
• These can easily affect respiratory, cardiovascular, and nervous systems.
• Communication and documentation
  – Include description of MOI.
  – Estimate amount of blood loss.
  – Note specific injuries
Care of Soft-Tissue Injuries
ABC

• Assess the ABCs and care for life-threatening injuries.
• Follow proper BSI precautions.
• Blood draining into the throat can lead to vomiting. Monitor airway constantly.
• Take appropriate precautions if you suspect a neck injury
Control Bleeding

- Control bleeding by applying direct pressure (unless you suspect a skull fracture)
- Remember: Injuries around the mouth may obstruct the airway.
Injuries of the Nose

- Blunt trauma to the nose can result in fractures and soft-tissue injuries.
- Cerebrospinal fluid coming from the nose is indicative of a basal skull fracture.
- Bleeding from soft-tissue injuries of the nose can be controlled with a dressing.
Injuries of the Ear

• Ear injuries do not usually bleed much.

• Place a dressing between the ear and scalp when bandaging the ear.

• For an avulsed ear, wrap the part in a moist sterile dressing.

• If a foreign body is lodged in the ear, do not try to manipulate it.
A direct blow to the mouth or nose can result in a facial fracture.

Severe bleeding in the mouth, loose teeth, or movable bone fragments indicate a break.

Fractures around the face and mouth can produce deformities.

Severe swelling may obstruct the airway.
Dislodged Teeth

- Dislodged teeth should be transported with the patient in a container with some of the patient’s saliva or with some milk to preserve them.
Blunt Injuries of the Neck

• A crushing injury of the neck may involve the larynx or trachea.
• A fracture to these structures can lead to subcutaneous emphysema.
• Be aware of complete airway obstruction and the need for rapid transport to the hospital.
Penetrating Injuries of the Neck

- They can cause severe bleeding.
- The airway, esophagus, and spinal cord can be damaged from penetrating injuries.
- Apply direct pressure to control bleeding.
- Place an occlusive dressing on a neck wound.
- Secure the dressing in place with roller gauze, adding more dressing if needed.
- Wrap gauze around and under patient’s shoulder
Eye Injuries
Eye Injuries

- Can produce severe complications
- Examine pupil for shape and reaction (if you can see it)
Appearance of Eye

• In a normal, uninjured eye, the entire circle of the iris should be visible
• Pupils should be round, equal in size, react equally when exposed to light
• Both eyes should move in same direction when following a finger
• Always note patient’s signs and symptoms including severity and duration
Airway and Breathing

- Consider immobilization
- Eye injuries can affect airway
- Check for clear, symmetric breath sounds
- Provide high-flow oxygen
- Palpate chest for DCAP-BTLS
Circulation

- Quickly assess pulse rate and quality.
- Control bleeding
- Do not put pressure on eye
- Wounds around eye:
  - bleed freely
  - Are not usually life threatening
  - Usually easy to control
Eye injuries are serious
Transport quickly and safely
Surgery/restoration of circulation to eye may need to be achieved in 30 minutes
Do not delay transport
Physical Exam

• Rapid physical exam
  – In bleeding cases, do not focus just on bleeding.
  – Quickly assess entire patient from head to toe.

• Focused physical exam
  – Begin with eyes and face
  – Assess eyes for equal gaze
  – Check pupil shape and response to light
  – Assess globe for bleeding
  – If eye is swollen shut, do not attempt to open
Baseline Vital Signs/SAMPLE History

• Baseline vital signs
  – Monitor for shock

• SAMPLE history
  – Perform as usual; obtain from responsive patient or family/bystanders

• Interventions:
  – Provide complete spinal immobilization
  – Be cautious in bandaging
Foreign Objects in the Eye

• For small foreign objects lying on the surface of the eye, irrigate with saline

• Flush from the nose outward
Removing a Foreign Object from Under the Eyelid

- Never attempt to remove an object on the cornea
- Have the patient look down
- Place a cotton-tipped applicator on the outer surface of the upper lid
- Pull the lid upward and forward
- Gently remove the foreign object from the eyelid with a moistened, sterile applicator
Foreign Objects Impaled in the Eye

• If there is an object impaled in the eye, do not remove it
• Immobilize the object in place
• Prepare a doughnut ring by wrapping a 2” piece of gauze around your fingers and thumb
• Remove the gauze from your hand and wrap remainder of gauze around ring
• Carefully place the ring over the eye and impaled object, without bumping the object
• Stabilize the object with roller gauze
• Cover the injured and uninjured eye
Chemical Burns

- Chemicals, heat, and light rays can burn the eye.
- For chemicals, flush eye with saline solution or clean water.
- You may have to force eye open to get enough irrigation to eye.
- With an alkali or strong acid burn, irrigate eye for about 20 minutes.
- Bandage eye with dry dressing.
Irrigating the Eye
Thermal Burns

• For thermal burns, cover both eyes with a moist, sterile dressing.

• Transport patient to a burn center
Infrared rays, eclipse light, direct sunlight, and laser burns can damage the eye

- Cover each eye with a sterile pad and eye shield
- Transport the patient in a supine position
Lacerations

- Lacerations to the eyes require very careful repair
- Never exert pressure on or manipulate the eye
- If part of the eyeball is exposed, apply a moist, sterile dressing
- Cover the injured eye with a protective metal eye shield
Blunt Trauma

- Blunt trauma can cause a number of serious injuries.
  - A fracture of the orbit (blowout fracture)
  - Retinal detachment
- May range from a black eye to a severely damaged globe
Hyphema

- Bleeding in the anterior chamber of the eye
- May seriously impair vision
Blowout Fracture

- May occur from blunt trauma caused by a fracture of the orbit
- Bone fragments may entrap muscles that control eye movement, causing double vision
Retinal Detachment

- Often seen in sports injuries
- Produces flashing lights, specks, or floaters in field of vision
- Needs prompt medical attention
Eye Injuries Following a Head Injury

- One pupil larger than the other
- Eyes not moving together or pointing in different directions
- Failure of the eyes to follow equally
  - Bleeding under the conjunctiva
  - Protrusion or bulging of one eye
Pupil Size and Head Injury

- Variation in pupil size may indicate a head injury
Contact Lenses and Artificial Eyes

- Contact lenses should be kept in the eyes unless there is a chemical burn.
- Do not attempt to remove a lens from an injured eye.
- Notify the hospital if the patient has contact lenses.
- If there is no function in an eye, ask if the patient has an artificial eye.
Contact Lens Removal

- If absolutely necessary, remove a hard contact lens with a small suction cup, moistening the end with saline.
- To remove a soft contact lens:
  - Place two drops of normal saline in eye.
  - Gently pinch it between your gloved thumb and index finger.
  - Lift it off surface of eye.