Face, Neck and Eye Trauma- OEC Chapter 22 Summary

**Key Terms:** Anisocoria, blowout fracture, cornea, epistaxis, external auditory canal, hyphema, lacrimal gland, mandible, maxilla, orbit, retinal detachment, sternocleidomastoid muscle, subcutaneous emphysema

**Anatomy and Physiology:**

* Study structures of the skull and face, inner/outer ear, structures and functions of the eye and neck. Also includes cervical spine! (C1-C7)

**Common Face, Neck and Eye Injuries:**

* Trauma related, Soft tissue, Penetrating or impaled objects, Blunt injuries, Fractures, Crushing injuries
* Airway concerns and C-Spine issues!!!

**Facial Injuries, Assessment and Management:**

* Injuries:
	+ Blowout Fractures, Epistaxis (nose bleeds), Damage to teeth, Soft tissue injuries, Airway concerns due to blood and swelling
* Assessment:
	+ Mid-Face and Nose: Examine nose for asymmetry, obstruction and bleeding. Assess cheeks. Assess bone stability by pressing down on both sides of the face and nose.
	+ Mouth: Examine lips and inside of mouth for bleeding. Also look for pale/bluish lips (signs of hypothermia or significant blood loss). Check for missing or loose teeth. Palpate jaw and neck for tenderness or crepitus.
* Management:
	+ Airway is the main concern!
		- Aggressive management, including positioning, suction, oxygen and possibly ventilation
	+ Epistaxis
		- Direct pressure to the bridge of the nose. Lean patient forward. Can use gauze to collect blood
	+ Mouth Injuries
		- Remove any broken teeth present. Collect any teeth that have been knocked out. Do not touch the root, do not wash!Can place tooth in sterile solution for transport, send with patient

**Ear Injuries, Assessment and Management:**

* Injuries:
	+ Foreign bodies, Lacerations, Contusions, Injury or rupture of tympanic membrane from loud noises
* Assessment:
	+ External structures
	+ Look for obvious signs of trauma. Determine source of bleeding. Look for clear fluid coming out of the ear, which may be cerebrospinal fluid, a sign of skull fracture. Also look for swelling in bruising behind the ears (Battle’s Sign), which indicates head trauma
	+ Evaluate patient’s hearing
* Management:
	+ Control bleeding. If the ear is amputated, preserve as you would a finger (Rinse with water/sterile solution, wrap in saline moistened gauze, and place in a plastic bag. Keep cool)
	+ Do not try and remove an object lodged in a patient’s ear- they need a higher level of care

**Neck Injuries, Assessment and Management:**

* Injuries:
	+ Life threatening. Closed (Swelling can compromise airway, crushing of larynx or trachea), Open (Damage multiple structures, profuse bleeding, air enters blood system). C-spine may be involved
* Assessment:
	+ Symmetry, Midline shift, Swelling, Subcutaneous emphysema (Filled bubbles palpable under the skin, indicate airway injury), Airway compromise, C-spine involvement, Bleeding, Jugular distention
	+ Assess CSMs!
* Management:
	+ Manage ABCD’s and spine accordingly
	+ C-spine stabilization!
	+ Severe bleeds can be controlled with occlusive dressing and direct pressure
	+ Keep patients with severe neck bleeding laying down to reduce chances of air embolism
	+ Don’t apply direct pressure to both sides of neck simultaneously (reduces airway) and do not wrap bandages around the neck
	+ Do not remove impaled objects unless airway is compromised

**Eye Injuries, Assessment and Treatment:**

* Injuries:
	+ Light related injuries (exposure to UV rays)
		- Can range from a superficial burn to permanent damage to the cornea
	+ Eyes are vulnerable to abrasive and penetrating injuries, including impaled objects (ski poles, tree branches)
	+ Hyphema
		- In blunt and penetrating injuries blood can accumulate in the anterior chamber of the eye
* Assessment:
	+ Inquire about vision (Lens, retina, structural involvement, glaucoma, contacts etc. Double vision?)
	+ Pupils – Equal? Reactive?
	+ Movement
		- To examine extraocular motions: Face the patient, have the patient focus on your finger and follow your finger with both eyes. Ensure eyes follow in a coordinated manner.
	+ Blood and color
		- Bloodshot Sclera
		- Hyphema
* Management:
	+ Eyeball/Eyelid lacerations
		- Do not apply pressure to the eye itself
	+ Retinal detachment (separation of the retina from the inside wall of the eyeball)
		- Symptoms include seeing specks, flashing lights, floaters in the visual field
		- May be caused by blunt trauma
		- Cover both eyes without pressure and transport
	+ Chemical burns
		- Immediately irrigate with sterile saline for at least 5 minutes
	+ Thermal burns
		- Cover both eyes with a moist sterile dressing
	+ Small foreign bodies can be gently removed with a cotton-tipped swab