General Assessment of Eye Trauma
Objectives

- Importance of ruling out globe rupture before manipulating the eye
- Review a Focused History relating to Ocular Trauma
- Review a Focused Past Ocular History relevant to Eye Trauma
- Discuss the components of a Focused Exam for Ocular Trauma
Why do we care?

- Eye trauma is a common problem seen in primary care and emergency medicine every day
- Millions of cases every year (3% of ER visits)
- 20% of adults have had eye trauma
- Accurate assessment and management needed to prevent permanent vision loss
- Simple ocular trauma can be taken care of by PCPs, while others need ophthalmologists (i.e. hyphema, orbital fracture, open globe)
“ABCs” prior to any history or exam!
Ruling Out Globe Rupture

*Prior to any focused history or physical exam*

- Most devastating of all eye injuries
- Suspicious history and/or Previous eye surgery
  - Hammering, Metalwork, etc.
- “Peaked Pupil” and/or Shallow Anterior Chamber
- Place Eye Shield & CALL OPHTHALMOLOGY immediately
  - Do NOT place a patch as pressure can extrude intraocular contents
  - No further eye exam or eye drops
Focused History: Ocular Trauma

STEP 1

Mechanism of Injury

- Blunt
- Sharp
- Chemical
- Thermal
STEP 2

Timing of Injury

• “Exactly when did the trauma occur?”
• Seconds, Minutes, Hours, Days
• Acute, Subacute, Chronic
Focused History: Ocular Trauma

STEP 3

Associated Symptoms

- Vision Loss
- Diplopia
- Bleeding / Lacerations
- Limited Eye Movements
- Pain
- Flashes / Floaters
Past Ocular History

- Poor vision since birth
  - Eyewear? Most recent eye exam?

- Recurrent ocular problems
  - Inflammatory or Infectious

- Contact lens usage

- Recent eye surgery
  - Cataract, Refractive / Corrective

- Previous history of eye trauma
Focused Exam: Ocular Trauma

STEP 1

Inspection (eyelids/eyebrows, glands, conjunctiva, sclera, pupils)
- Periocular ecchymosis
- Eyelid lacerations
- Integrity of cornea, sclera, & conjunctiva
- Blood in anterior chamber
- “Peaked Pupil”
Focused Exam: Ocular Trauma

STEP 2

Visual Acuity
Visual Fields
Pupillary Response
Extraocular Movements (EOMs)
• Entrapped muscles?
Focused Exam: Ocular Trauma

STEP 3

Ophthalmoscope Exam

- Optic Nerve Swelling
- Retinal Detachment
- Hemorrhage
- Vessel Emboli / Occlusion
Focused Exam: Ocular Trauma

STEP 4

Seidel Testing

- Assess for corneal break
- Apply fluorescein to suspected area
  - Normally appears “green” under cobalt blue light
  - Dye turns “clear” when break present as aqueous dilutes fluorescein
Summary of Key Points

- Eye trauma is a common presenting problem in all emergency rooms
  - Proper assessment / management can save someone’s vision
- Remember "ABCs" and ruling out globe rupture prior to continuing exam
- Focused History: Mechanism, Timing, Associated Symptoms
- Past Ocular History
- Focused Exam: Inspection, VA, VF, Pupils, EOMs, Ophthalmoscope, Seidel
THANK YOU!