21y.o. male with unilateral loss of vision after acute trauma to orbit during college basketball game

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Traumatic hyphema and partial lens subluxation of right eye

Blood in anterior chamber of the eye after blunt trauma
Asymmetric distortion of right lens

- Right lens
- Left lens (unaffected)
(Subtle) findings of scleral trauma/rupture

- Asymmetric deep anterior chamber
- Partial lens subluxation
Asymmetrically deep right anterior chamber
Traumatic hyphema

Presentation

- Vision loss, eye pain, and photophobia after history of blunt trauma

- Visible layering of RBCs in anterior chamber on exam
Traumatic hyphema

Epidemiology
- Incidence: ~12 injuries per 100,000 population
- 70% occur in children (peak incidence between ages 10-20y)

Etiology
- Can be traumatic (from blunt or penetrating trauma) or spontaneous (in patients with ↑bleeding or conditions that cause ischemia and vascular changes in anterior chamber)
- Complications: ↑intraocular pressure, optic atrophy, secondary hemorrhage, open globe, permanent vision loss
- Sickle cell disease/trait and clotting disorders or use of anticoagulants ↑risk of complications of hyphema

Pathophysiology
- Blunt trauma stretches globe, distorting normal eye architecture
- Bleeding is from tearing of ciliary body and iris
Traumatic hyphema

Diagnosis
• Clinical diagnosis made based upon **history of eye trauma** and characteristic findings during ophthalmologic exam such as **layered blood in anterior chamber**
• Imaging:
  – **CT orbit** no contrast to check for open globe
  – **Ultrasound of eye** to assess for lens damage but should be avoided in suspected open globe

Treatment
• Prompt evaluation by ophthalmologist
• Monitor intraocular pressure
• Limit activity (keep head elevated, limit reading, etc)
• Eye shield to avoid further injury
• Glucocorticoid eye drops to decrease risk of rebleeding
References


