

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

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A large, stylized oak leaf graphic in a dark blue color, positioned on the left side of the slide. The leaf has a prominent central vein and several smaller veins branching off it. The leaf's edge is serrated.

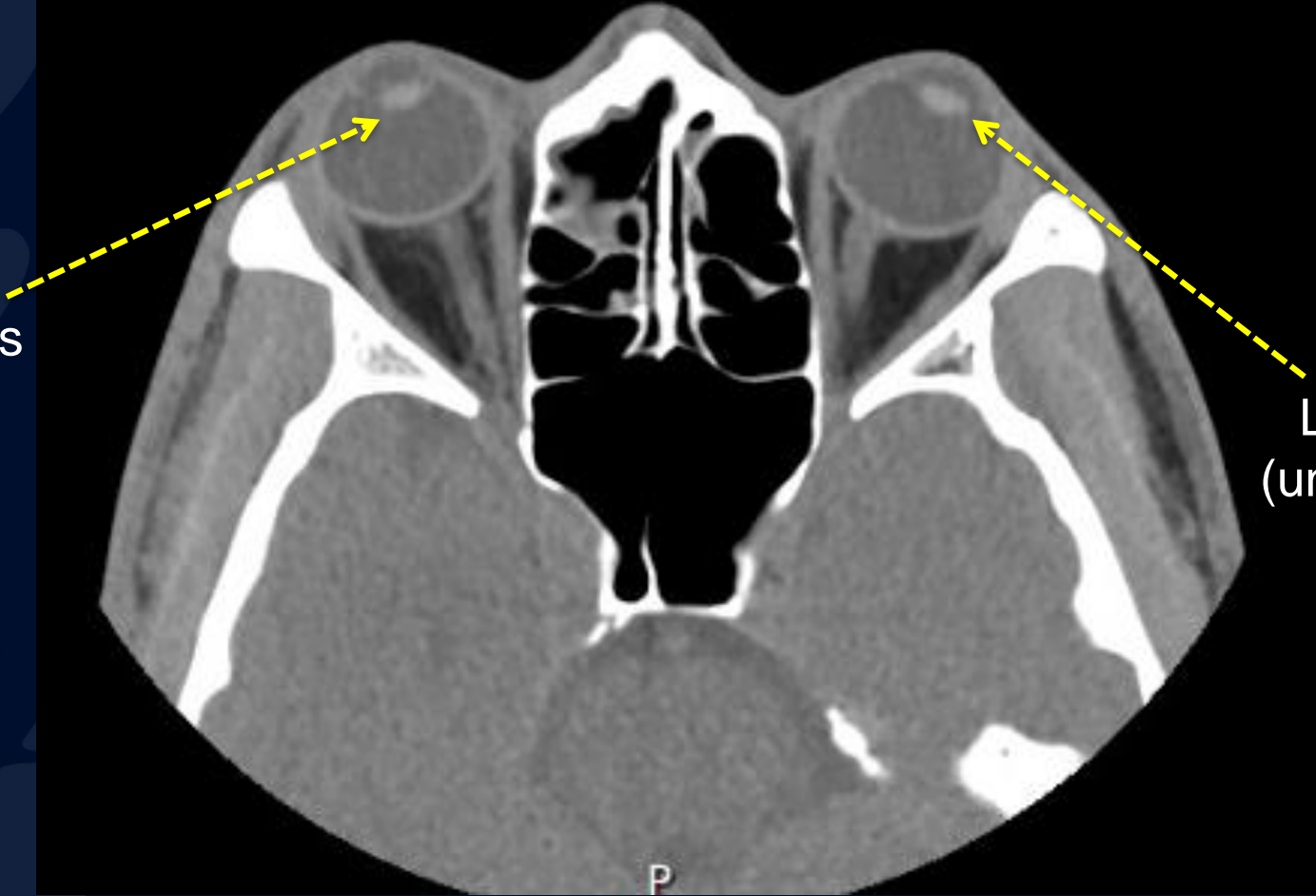
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Traumatic hyphema and partial lens subluxation of right eye

Blood in anterior chamber of the eye after blunt trauma

Asymmetric distortion of right lens

Right lens



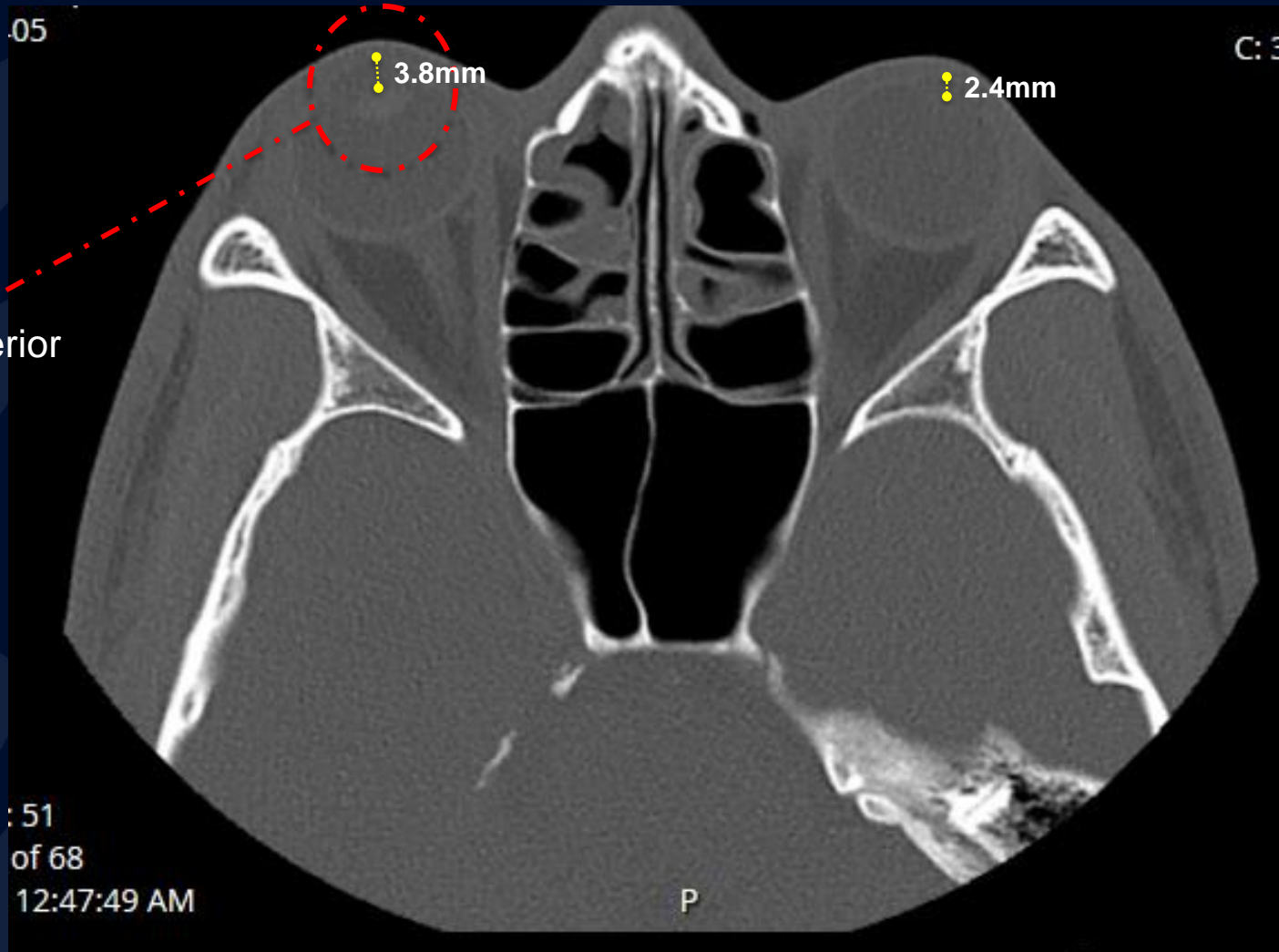
Left lens
(unaffected)



(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

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3. Walton W, Von Hagen S, Grigorian R, Zarbin M. Management of traumatic hyphema. Surv Ophthalmol 2002; 47:297.
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