

A case of traumatic hyphema in a healthy young male

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Background

The patient was a healthy 28-year-old male who presented to the Emergency Department (ED) after sustaining an injury to his right eye. While working out with an exercise band, it snapped back, hitting the patient in the eye. He experienced photophobia, blurry vision, eye pain and excessive tearing of the eye immediately after the incident occurred. The patient also developed gross blood over the anterior chamber of the eye (Figure 1). This prompted the patient to seek emergency care for further evaluation.

Objective

To identify hyphemas in the clinical setting, be able to grade the hyphema and initiate the appropriate follow-up and treatment.

Physical Exam

- Vital signs: T 98.0F, HR 73, BP 135/77, RR 16 and SpO2 99%
- HEENT: dependent layering of blood visible in the anterior chamber of the right eye, grade I (Figure 2). Right pupil was dilated with minimal responsiveness to light. There was decreased temporal visual field on the right. The left eye was atraumatic in appearance.
- Visual acuity was OD (right eye) 20/70, OS (left eye) 20/10, OU (both eyes) 20/10
- Intra-ocular pressure was 21 mm Hg on the right and 16 mm Hg on the left
- Staining with tetracaine and fluorescein did not reveal any evidence for corneal abrasion, ulceration or an open globe.

Images



Figure 1: hyphema of the right eye

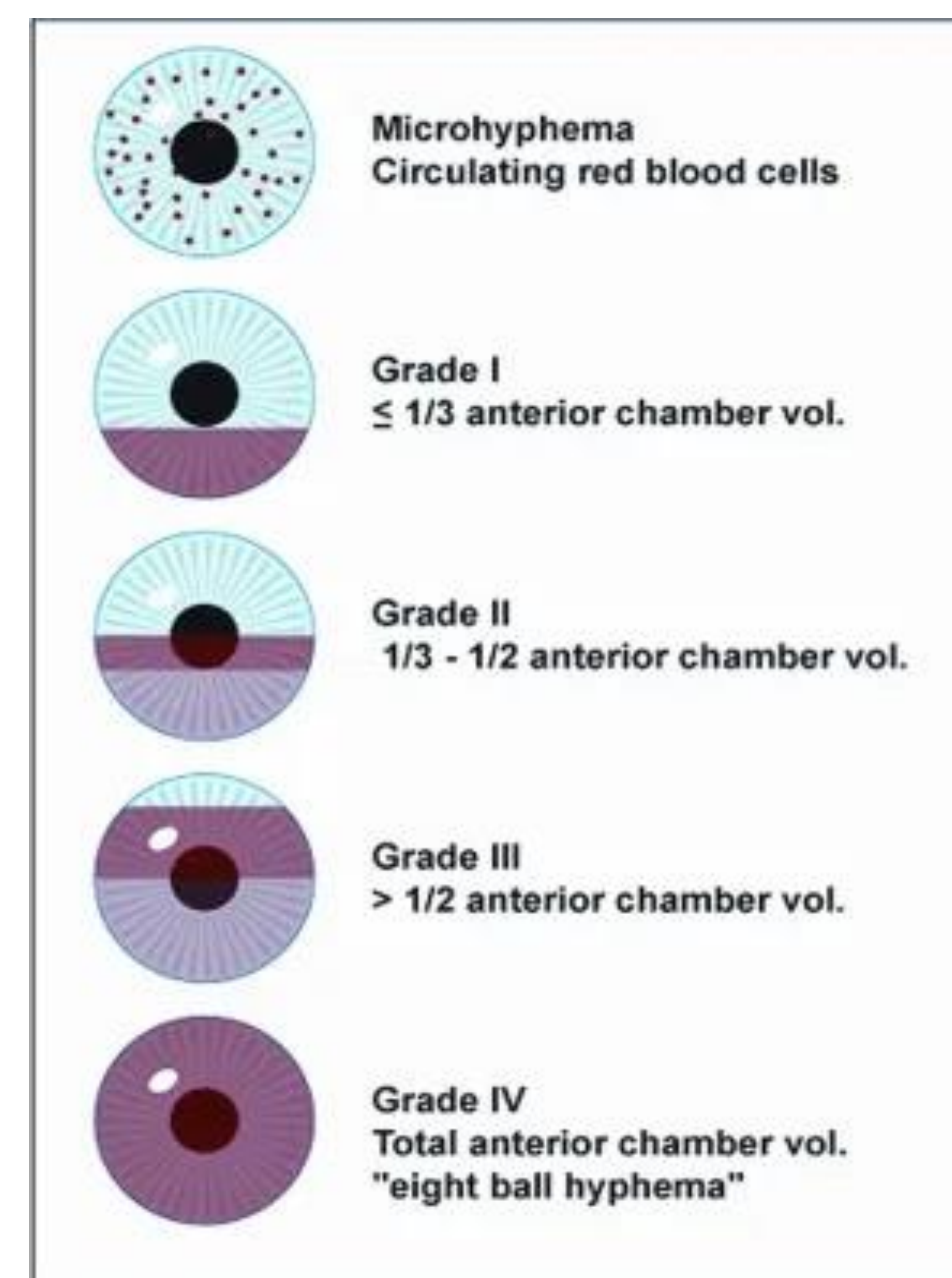


Figure 2: grading of hyphemas (1)

Discussion

The patient suffered a traumatic hyphema which is a collection of blood in the anterior chamber of the eye due to tearing of the iris root vessels. The most common cause is a result of blunt trauma to the eye. Spontaneous hyphemas can also occur and is often associated with sickle cell disease. Iatrogenic causes due to ocular surgery, anticoagulant use and neoplastic disease are also known risk factors. Hyphemas are an ocular emergency and should prompt immediate consultation with an ophthalmologist. The patient should elevate the head of the bed to 45 degrees since layering of the blood is gravity dependent. Treatment is supportive and usually involves the administration of steroidal and cycloplegic ophthalmic drops.

In this patient, ophthalmology was consulted. Since he was young and healthy with a low grade hyphema, he was discharged with close outpatient follow-up the next day. The patient was instructed to sleep with the head of the bed elevated and refrain from any activities that could raise intra-ocular pressure – such as heavy lifting. Additionally, he was prescribed cycloplegic and analgesic eye drops for symptomatic management.

Conclusion

Hyphemas are ophthalmologic emergencies which require prompt diagnosis and consultation. It is important to rule-out concomitant eye injuries, including but not limited to acute closed angle glaucoma, open globe rupture and corneal abrasion/ulceration. At two-month follow-up, the patient continues to experience cycloplegia with blurry vision.

References

- 1) *Hyphema Grading System*. American Academy of Ophthalmology, <https://www.aao.org/education/image/hyphema-grading-system-2>. Accessed 7 Apr. 2023.
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- 3) *Traumatic hyphema* - WikEM. (n.d.). Wikem.org. Retrieved February 15, 2023, from https://wikem.org/wiki/Traumatic_hyphema