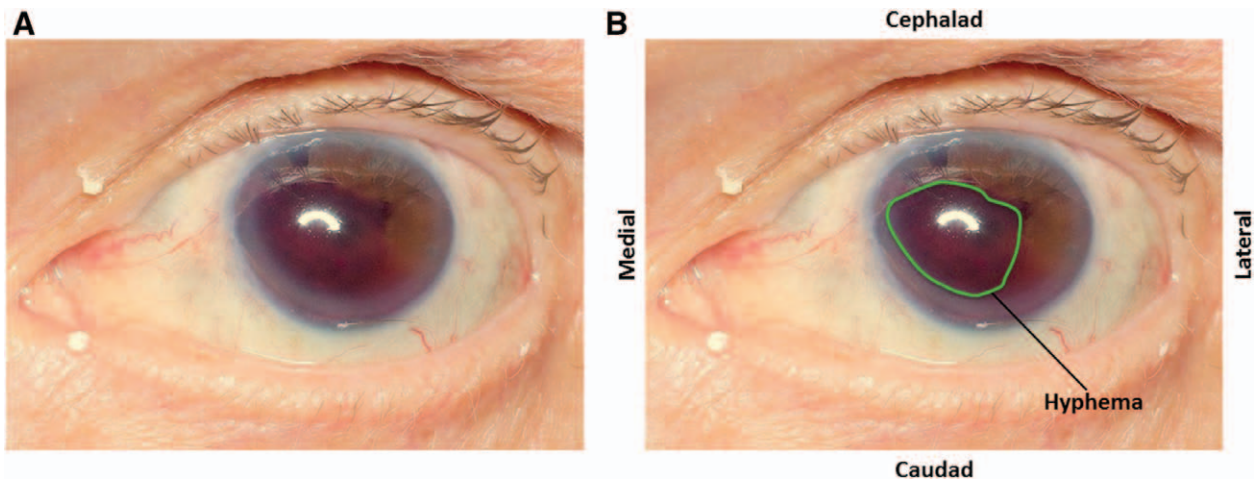


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## Images in Anesthesiology: Spontaneous Hyphema after Cardiac Surgery

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**T**HE anterior chamber of the eye, bordered by the iris and lens posteriorly and cornea anteriorly, normally contains clear aqueous humor. Hyphema (fig. A), or blood grossly visible in the anterior chamber, may cause permanent vision loss and most commonly occurs after ocular trauma. Spontaneous (nontraumatic) hyphema may arise from underlying bleeding disorders, anticoagulation/antiplatelet medications, vascular malformations, ocular abnormalities, closed-angle glaucoma, sickle cell anemia, acute leukemia, rheumatologic disorders, or lymphoma.<sup>1-3</sup> Rarely, spontaneous hyphema may present after nonophthalmic surgery (fig. A), perhaps as a result of intraoperative heparinization, coagulopathy, severe hypertension, or during emergence from anesthesia.<sup>1</sup> Patients with spontaneous hyphema commonly present with vision loss; however, careful physical examination (fig. B) may be the only indication of its presence in mechanically ventilated and sedated patients after interventions such as cardiac surgery.

After spontaneous hyphema diagnosis postoperatively, prompt ophthalmologic consultation and examination should be sought to rule out open globe injury and other ocular conditions such as microbial keratitis, iris neovascularization, iritis, uveitis, and retinoblastoma.<sup>2,3</sup> Management includes head elevation facilitating hyphema clearance (typically occurring in about 1 week), coagulopathy correction, medical treatment of intraocular hypertension if present, eye shield use, analgesia, and antiemetic therapy as required to mitigate intraocular pressure increases. Intraocular pressure should be serially monitored by tonometry only after open globe injury has been excluded. Need for surgical hyphema evacuation is based on the presence of intraocular hypertension, secondary hemorrhage, or large nonresolving hyphemas. Poor visual prognosis is associated with large hyphemas, rebleeding, intraocular hypertension, or underlying conditions such as sickle cell anemia.

### Competing Interests

The authors declare no competing interests.

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