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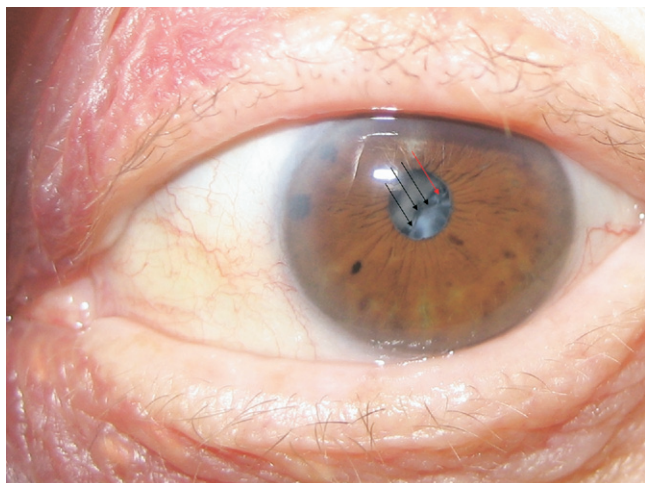


Figure 1. Laterally subluxed lens (black arrows) and trailing zonular fibers (red arrow).



Figure 2. An orbital computed tomographic scan revealing an anteriorly and laterally subluxed lens. Used with permission of Barry Hahn, MD, Department of Emergency Medicine, Staten Island University Hospital, Staten Island, NY.

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A 78-year-old woman complained of pain in her eye after a fall. Visual acuity was 20/40 on the right and 20/200 on the left. Physical examination results were further remarkable for monocular diplopia. A laterally subluxed lens (black arrows) and trailing zonular fibers (red arrow) was directly visualized (Figure 1). A computed tomographic scan, which was ordered to exclude concomitant trauma, confirmed the finding of an anteriorly subluxed lens (Figure 2). Emergency ophthalmology consultation was obtained. Because there was no evidence of increased intraocular pressure, repair was deferred for elective basis.

For the diagnosis and teaching points, see page 481.

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DIAGNOSIS

Superior orbital wall fracture with retro-orbital hematoma. Limitation of upward gaze in the setting of trauma is most commonly associated with a fracture of the floor of the orbit, typically referred to as “blowout fracture.” Entrapment of the inferior rectus muscle within the orbital floor may lead to ophthalmoplegia and diplopia. In such cases, posterior displacement of the globe and prolapse of orbital contents into the maxillary sinus more commonly leads to enophthalmos (recession of the globe into the orbit), as opposed to proptosis.¹

This patient had limitation of upward gaze, with proptosis and orbital dystopia with the right eye lower than the left (Figure 1). Here, limitation of upward gaze was due to a mass lesion (retro-orbital hematoma) impinging on the globe (Figure 2), rather than extraocular muscle dysfunction. Orbital roof fractures are rare,² although they are more common in young children because of their high cranium-to-midface ratio.¹⁻⁴ Such fractures have a high association with intracranial injury, most commonly epidural hematoma, as was seen in our patient (Figure 3).

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DIAGNOSIS:

Ectopia lentis. Ectopia lentis, most commonly caused by trauma, occurs as a result of a rupture of the zonular fibers.¹ Common presenting symptoms include decreased vision, pain, accommodation loss, and monocular diplopia.² Iridodonesis (iris tremulousness) or phacodonesis (lens tremulousness) may be observed. In the absence of trauma, hereditary/systemic disease (eg, Marfan’s syndrome, homocystinuria) should be considered.³

Treatment is dictated by the cause of the dislocation, location of the displaced lens, and presence of any eye injury.⁴ If the lens displaces into the anterior chamber, glaucoma may result. In this case, one may consider reclining the patient until the lens falls back into place and then applying pilocarpine. If glaucoma does develop, emergency iridotomy is indicated. Posterior displacement of the lens may cause uveitis and retinal damage. Under these circumstances, vitrectomy and lens extraction are necessary. For stable refractive errors, visual correction with glasses may be an option. All instances require emergency ophthalmologic consultation.⁵

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