

Case #31921378

Summary: Orbital air (orbital emphysema) from air entering orbital compartment due to orbital fracture and the large pocket of orbital air compresses the optic nerve transiently.

History

Presentation:

A 26-year-old male was taken to the emergency room after being involved in a motor vehicle accident with subsequent transient visual loss.

Inquiry: Bilateral vs

Unilateral unilateral

Inquiry: Duration

A few minutes per episode, episodes about 10 minutes apart.

Inquiry: Episode Characteristics

Complete black out of vision

Inquiry: Activity during the episode

During retching (reverse movement of the stomach and esophagus without vomiting) in ER

Inquiry: Pattern of visual loss

Complete black out in right eye only.

Inquiry: Other Symptoms

Motor vehicle accident, currently nauseated

Inquiry: Current

Medication No

medications

Exam Results

On exam, during the episode the vision was bare light perception OD and

20/20 OS. There was a rather large relative afferent pupil defect in the

right eye.

Ocular motility was normal.

Intraocular pressure was 26 mm Hg OD and 15 mmHg OS.

A few minutes later, vision returned to 20/20 in the right eye and there was

no RAPD. Dilated fundus exam revealed a normal retina and optic nerve.

Commentary:

This is an uncommon cause for repeated episodes of unilateral transient visual loss in the context of orbital trauma. The clue is that the episodes came on during sudden increases in intrathoracic or sinus pressure from writhing or vomiting and subsides after a few minutes as the air spontaneously dissipates from the orbit. Coughing or sneezing in this setting could also suddenly increase the volume of orbital air through an orbital fracture communicating with the sinus. If the vision loss because longer in duration, then sometime the air needs to be decompressed by introducing a needle into the retrobulbar space.

A retrobulbar hemorrhage could raise intraocular pressure to a high enough level that transient drops in blood pressure could also

produce transient visual loss episodes as the blood pressure fluctuates in the setting of orbital trauma.

