What You Should Know About Terson's Syndrome

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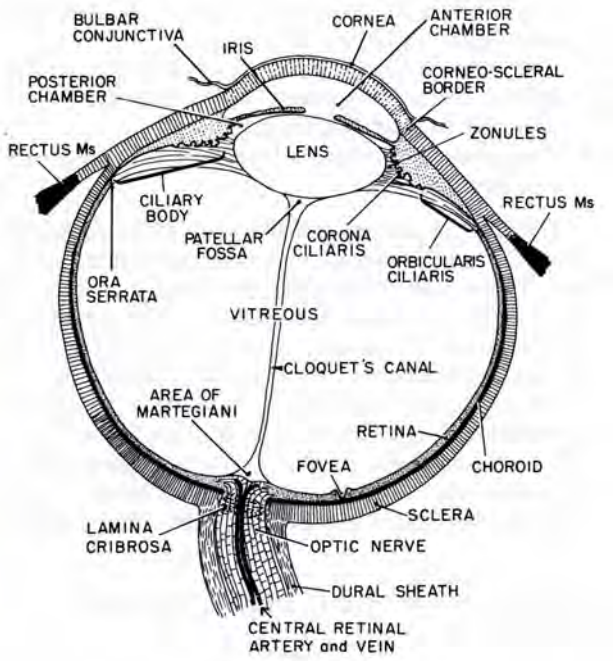
Terson's syndrome is a condition in which intracranial bleeding is associated with hemorrhage inside the eye. Most cases of Terson's syndrome involve patients who have had subarachnoid hemorrhages. These frequently arise after rupture of an intracranial aneurysm, or dilated vessel in the brain. The sudden release of blood into the spinal fluid that surrounds and bathes the brain causes a rapid rise of pressure in this fluid filled space – the subarachnoid space. The central vein as it passes out of the eye travels through the subarachnoid space and is compressed by the suddenly elevated pressure. When the central retinal vein is compressed, backpressure within the veins of the eye leads to bleeding inside the eye, which can be seen as dot-like hemorrhages within the retina, or a large collection of blood within the vitreous humor, the viscous clear fluid that fills the eye. Figure 1 shows the vitreous humor and the central retinal vein.

Figure 1. Eye Anatomy



Characteristics of Patients With Terson's Syndrome

Patients developing intracranial hemorrhage and Terson's syndrome usually have lost consciousness, and may be in a coma for an extended period. Usually the intraocular bleeding occurs in both eyes. Although the vitreous blood can clear spontaneously, it can take a year or more, hence an operation called a vitrectomy is often performed to remove the blood and restore vision more rapidly. Occasionally the intracranial bleeding damages the retina, and sometimes later a layer of scar tissue develops on the surface of the retina. This so-called epiretinal membrane can be surgically removed if it interferes with vision. Occasionally retinal detachments follow Terson's syndrome, presumably caused by changes in the vitreous body influenced by the blood. These can be repaired with surgery as well.

Final Comments

Eighty to ninety percent of patients with Terson's syndrome can regain driving vision after surgery to remove the intraocular blood. The major challenge is to have the

patient examined by an ophthalmologist. Because of the loss of consciousness, patients frequently do not communicate visual disturbances for long periods after the intracranial bleeding. Other, more pressing neurological problems may lead to delay in recognition of ocular problems. Neurosurgeons and neurologists know to obtain ophthalmic consultation if visual disturbance is recognized in the setting of intracranial bleeding.

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