Terson’s Syndrome

Abstract

Terson’s syndrome is a rare condition in which a vitreous hemorrhage, usually bilateral, can occur from the sudden increase of intracranial pressure due to spontaneous or trauma-related intracranial bleeding. Ocular management includes observation or surgery.

I Case History

a) Demographics

i) 33-year-old Caucasian male new to the Eye Clinic

b) Chief Complaint

i) Decreased vision OD>OS since stroke 9 months ago

c) Ocular History

i) Non-contributory

d) Medical History

i) Posterior circulation stroke likely from vertebral artery dissection due to self-manipulation (“popping”) of neck 9 months ago

(1) s/p ventriculoperitoneal (VP) shunt placement consequent to presumed CSF obstruction in the posterior fossa

ii) DM x 1 year (controlled with diet & exercise)

iii) HTN

e) Medications

i) Aspirin, lisinopril

II Pertinent Findings

a) Clinical

i) BCVA: OD 20/300, OS 20/200
ii) Pupils: PERRLA

iii) Anterior segment: unremarkable, no NVI OU

iv) Tonometry: 14 OD, OS

v) Posterior segment: condensed vitreous hemorrhage (VH) OD, OS

(1) No views of fundus OD, OS

vi) B-scan: OD/OS mobile vitreous debris, attached to and emanating from optic nerve

b) Physical

i) BP: 120/78

c) Laboratory studies

i) HgA1c: 5.5%

III Differential Diagnosis of VH

a) Primary/leading

i) Terson’s syndrome

b) Other etiology of VH

i) Proliferative diabetic retinopathy, retinal tear or detachment, retinal vein occlusion, trauma, PVD, age-related macular degeneration, HTN

IV Diagnosis/Discussion

a) The pathophysiology of Terson’s syndrome is unclear but it is believed that a ruptured intracranial aneurysm or hemorrhage can rapidly increase the intracranial pressure leading to the sudden effusion of CSF or blood into the optic nerve sheath. This event can increase orbital venous pressure resulting in the compression of the ophthalmic vein and cause intraocular bleeding.

b) Significant VH will occur if the blood breaks through the internal limiting membrane or the posterior hyaloid face and moves into the vitreous gel.

V Treatment, Management

a) Observation: VH OS self-resolved over several months and VA now 20/20
b) Surgery: Non clearing VH s/p pars plana vitrectomy done 3 months after presentation and VA now 20/20

VI Conclusion

a) Though uncommon, Terson’s Syndrome is a possible etiology in patients presenting with vitreous hemorrhage and a history of intracranial bleeding.