

Vitreous Disorders

Last updated: September 5, 2017

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VITREOUS HEMORRHAGE

- blood extravasation within or around vitreous body.

ETIOLOGY

- 1) **retinal neovascularization** - neovascular fragile vessels (e.g. diabetic retinopathy!!!, retinal vein occlusion, retinopathy of prematurity)
- 2) posterior vitreous detachment with retinal vascular tear, retinal tears, ocular trauma
- 3) subretinal bleeding with **secondary extension** into vitreous.
- 4) **TERSON syndrome**: SAH → acutely elevated ICP transmitted to retinal venules via optic nerve; 33% SAH patients have associated intraocular hemorrhage!!!

N.B. *coagulation disorders / anticoagulant therapy* does not cause vitreous hemorrhage!

Clinical features - large **FLOATERS**, painless monocular **VISUAL LOSS**.

- hemorrhage tends to absorb slowly.

Complications:

- 1) **hemosiderosis bulbi** with photoreceptor toxicity
- 2) **glaucoma** secondary to blockade of trabecular meshwork by formed *ghost cells* (develop from long-standing blood cells in vitreous)
- 3) severe **floaters**
- 4) **myopic shift** and **amblyopia** in infants.

Diagnosis - black reflex on ophthalmoscopy; blood impedes complete fundus examination (H: B-scan ultrasonography).

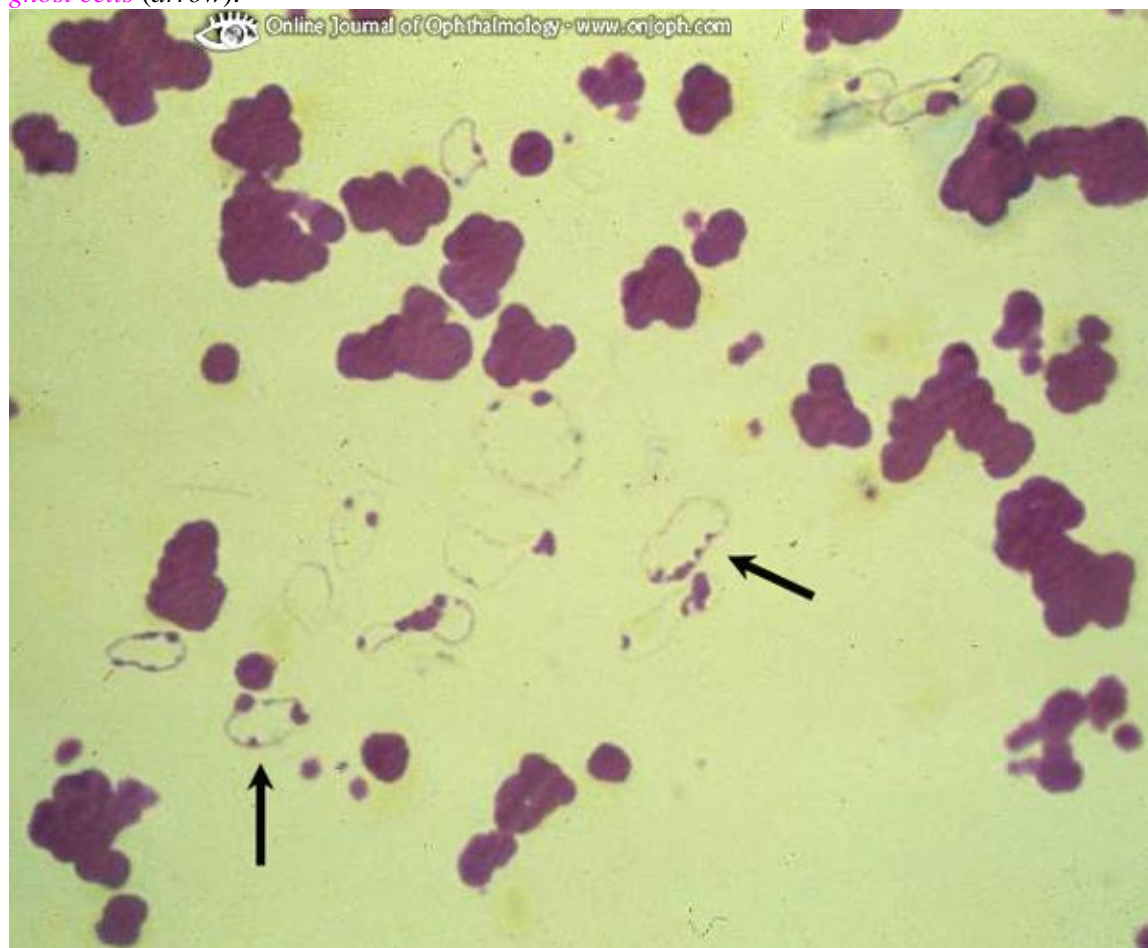
N.B. examine carefully to **rule out possible retinal detachment!**

Old Vitreous Hemorrhage; diffuse yellowish opacity through which one may get orange reflex; it consists of breakdown products of hemoglobin:



Source of picture: "Online Journal of Ophthalmology" >>

Old Vitreous Hemorrhage, Histology; hemoglobin breakdown products are seen in addition to *erythrocyte ghost cells* (arrow):



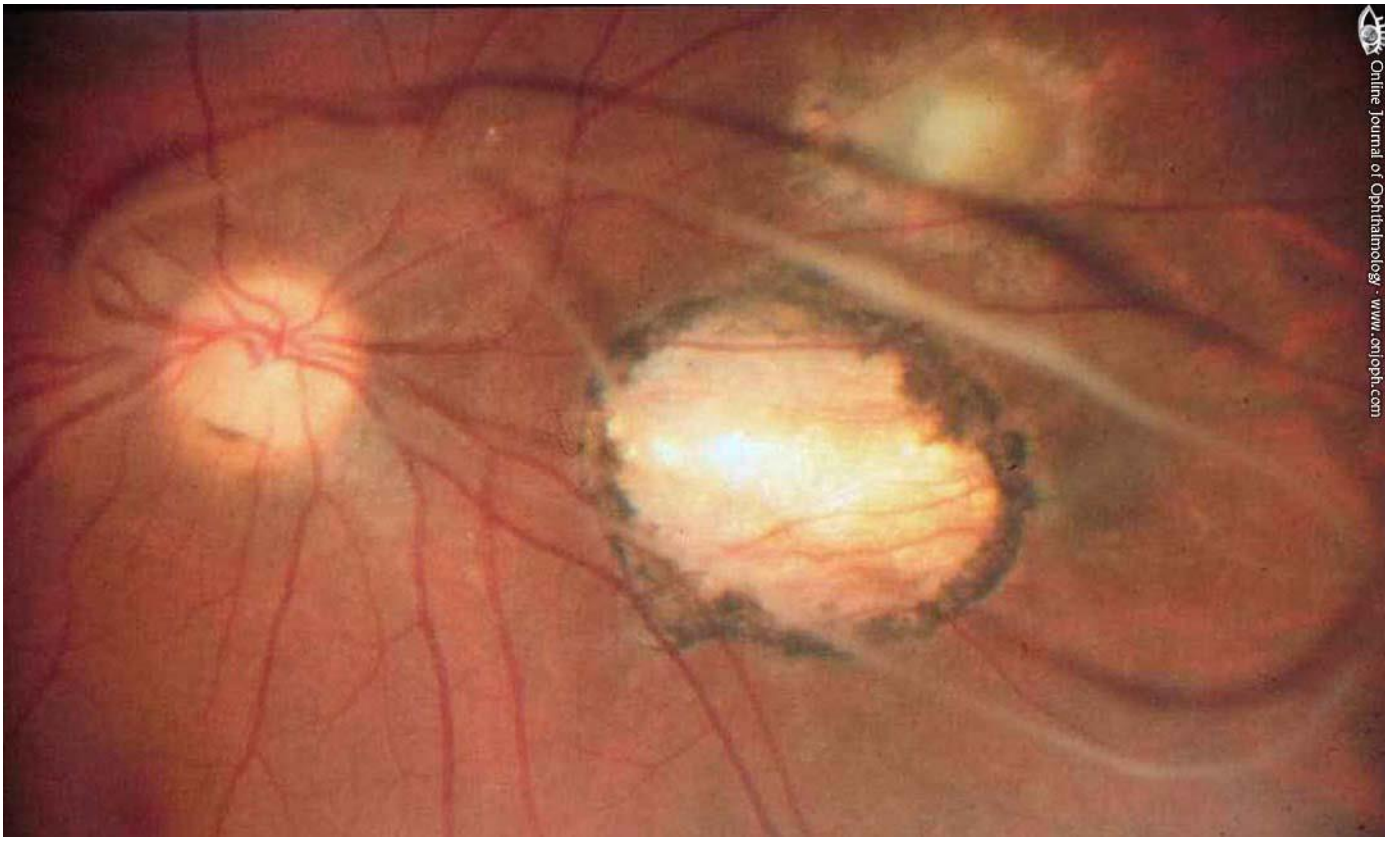
Source of picture: "Online Journal of Ophthalmology" >>

TREATMENT

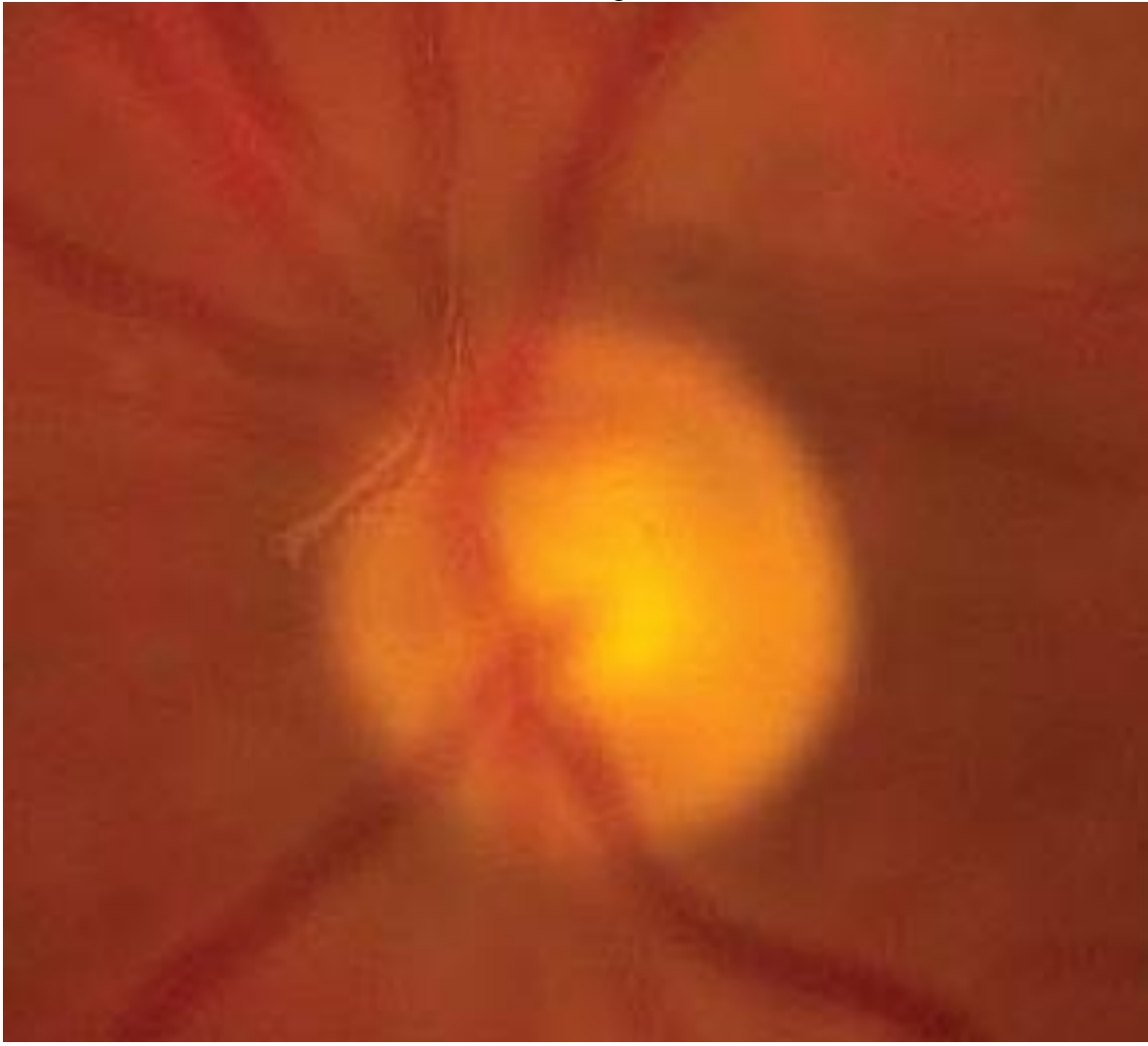
- bed rest with head elevated 30-45° with occasional bilateral patching (to allow blood to settle inferiorly).
- treat cause (e.g. photocoagulation of new vessels).
 - localized bleeding** → photocoagulation.
 - nonclearing vitreous hemorrhage** → pars plana vitrectomy.

POSTERIOR VITREOUS DETACHMENT

- **contraction of vitreous gel** → separation from retina → macroscopic opaque aggregates of vitreous fibers floating in vitreous → **FLOATERS** (become less noticeable with time).
- more prevalent in **highly myopic** and **older** persons.



Posterior vitreous detachment without Weiss ring:



BIBLIOGRAPHY for ch. "Ophthalmology" → follow this [LINK >>](#)