

# Vitreous Disorders

Last updated: May 9, 2019

**VITREOUS HEMORRHAGE** ..... 1  
 Etiology ..... 1  
 Treatment ..... 1  
**POSTERIOR VITREOUS DETACHMENT**..... 1

## 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).

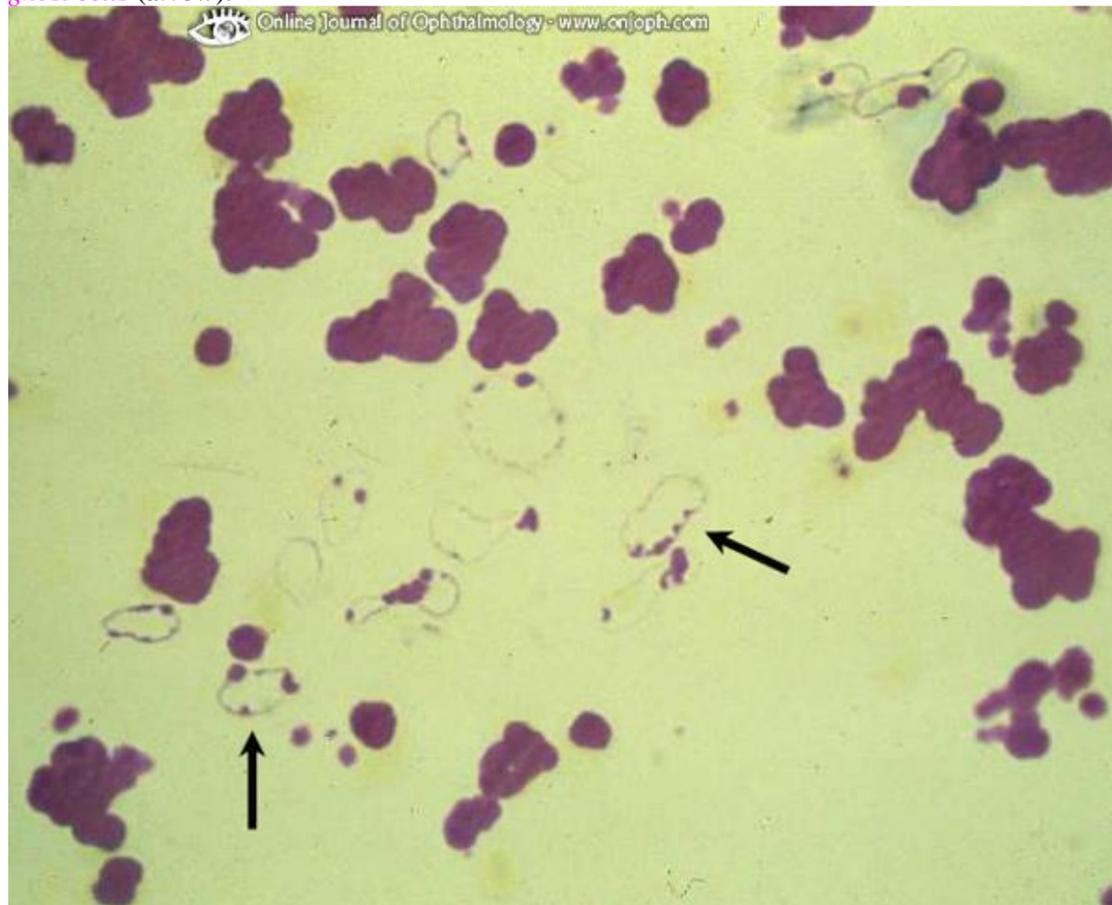
N.B. examine carefully to **rule out possible retinal detachment!**

**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):



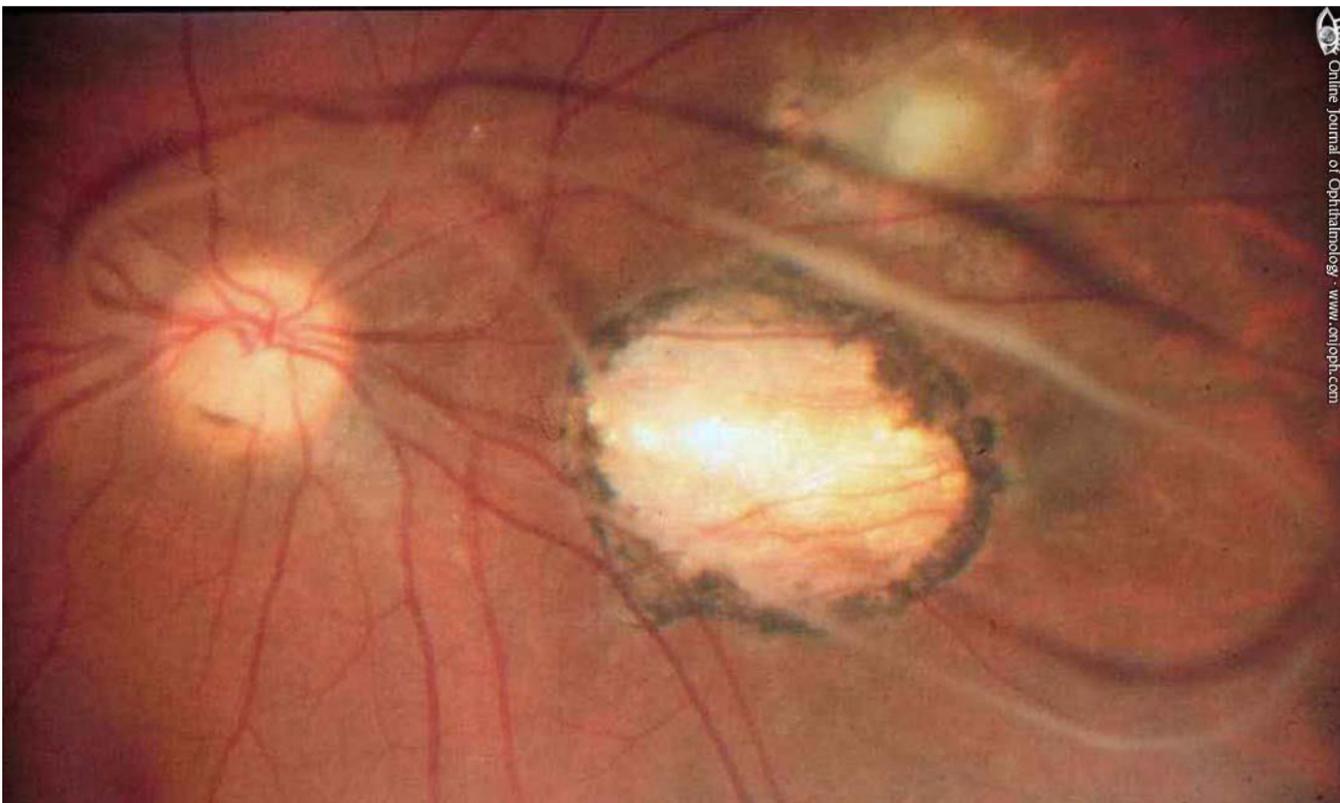
Source of picture: "Online Journal of Ophthalmology" >>

### TREATMENT

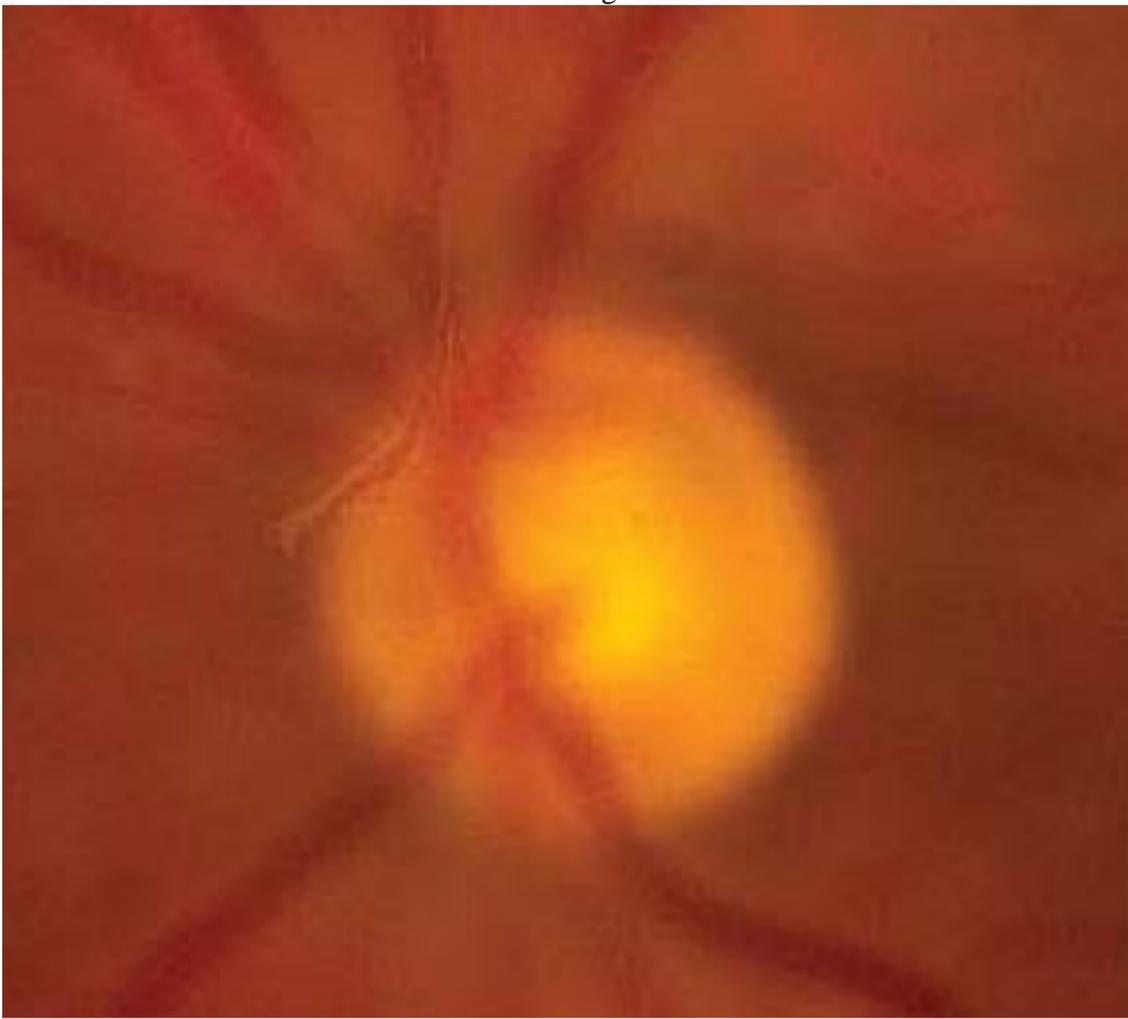
- bed rest with head elevated 30-45° with occasional bilateral patching (to allow blood to settle inferiorly).
- treat cause (e.g. photocoagulation of new vessels).  
**localized bleeding** → photocoagulation.  
**nonclearing vitreous hemorrhage** → pars plana vitrectomy.

## 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 >>](#)