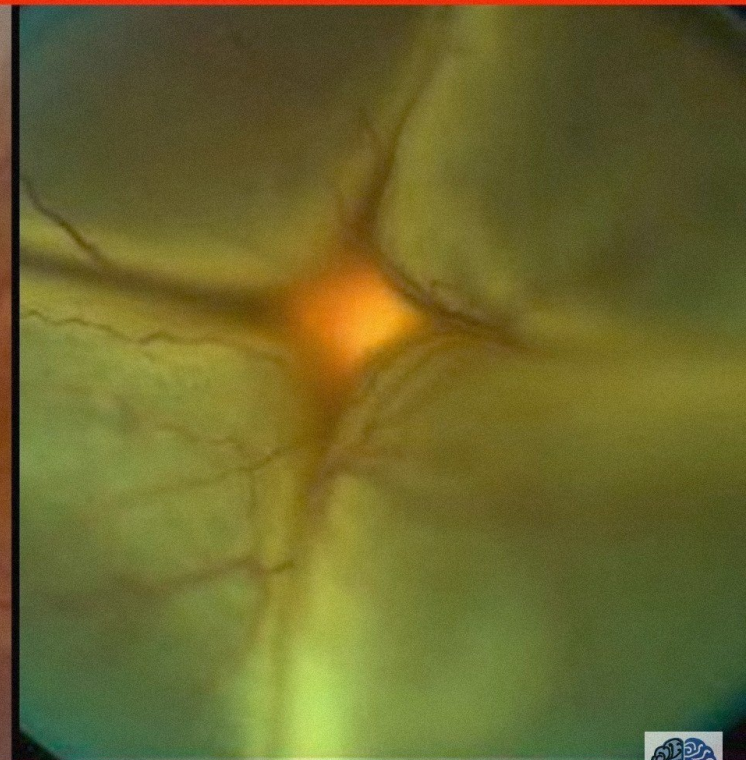
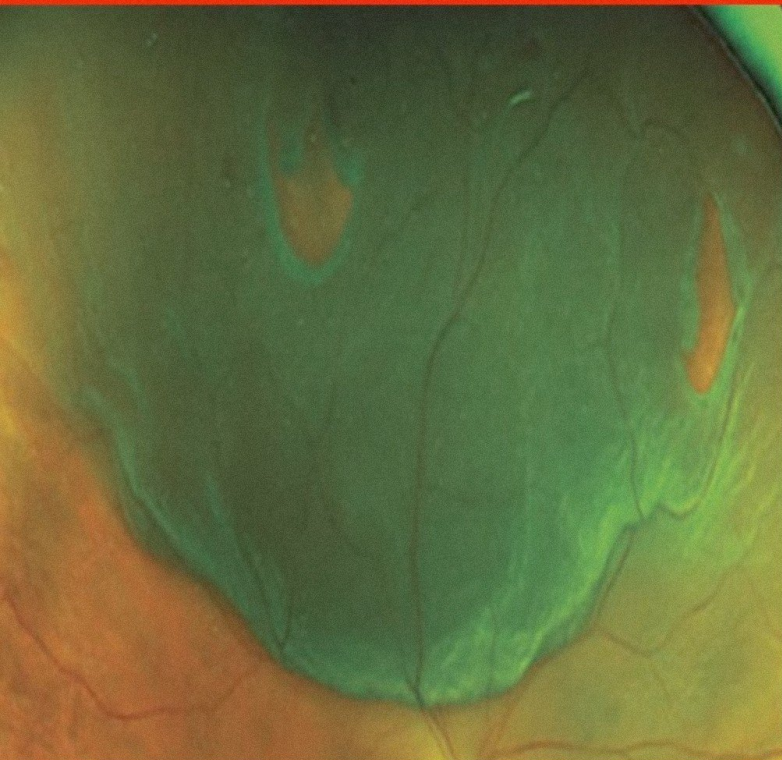
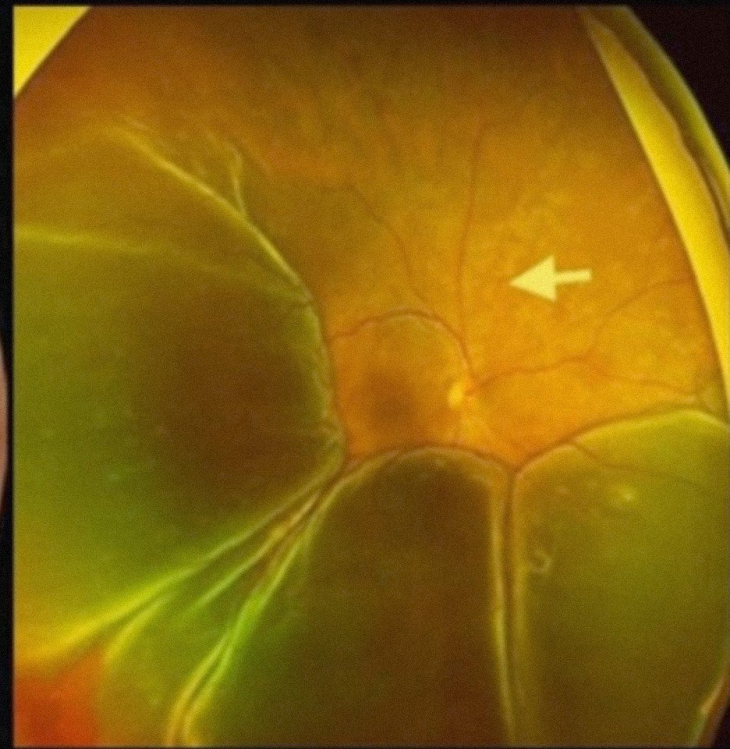
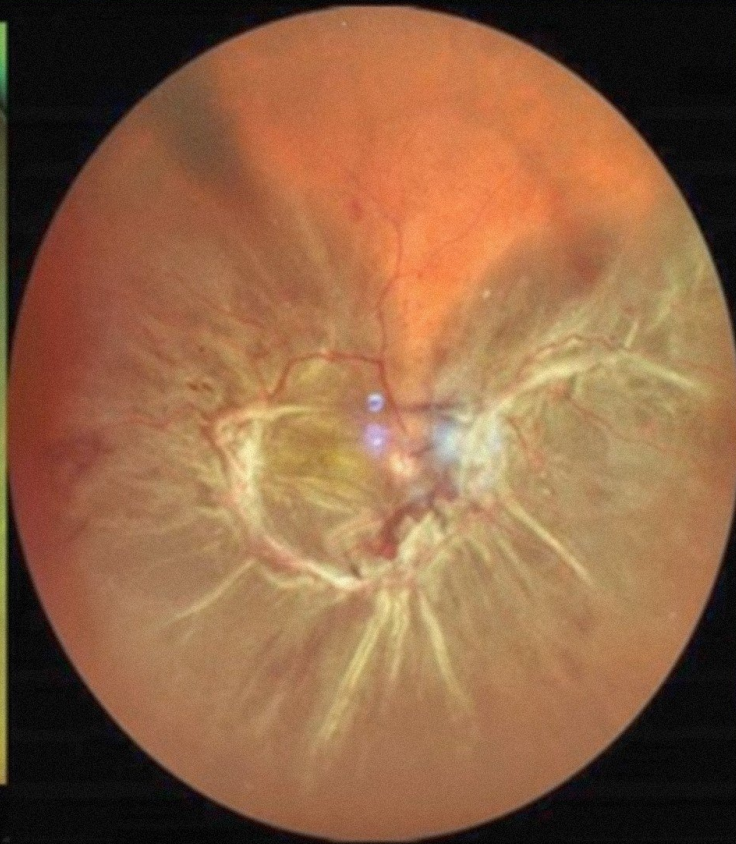
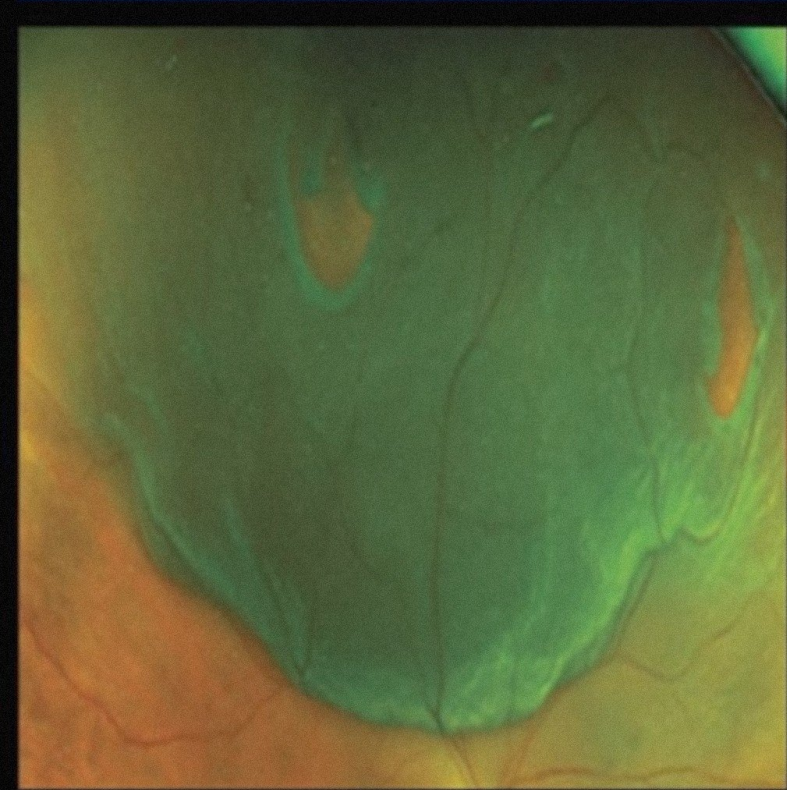


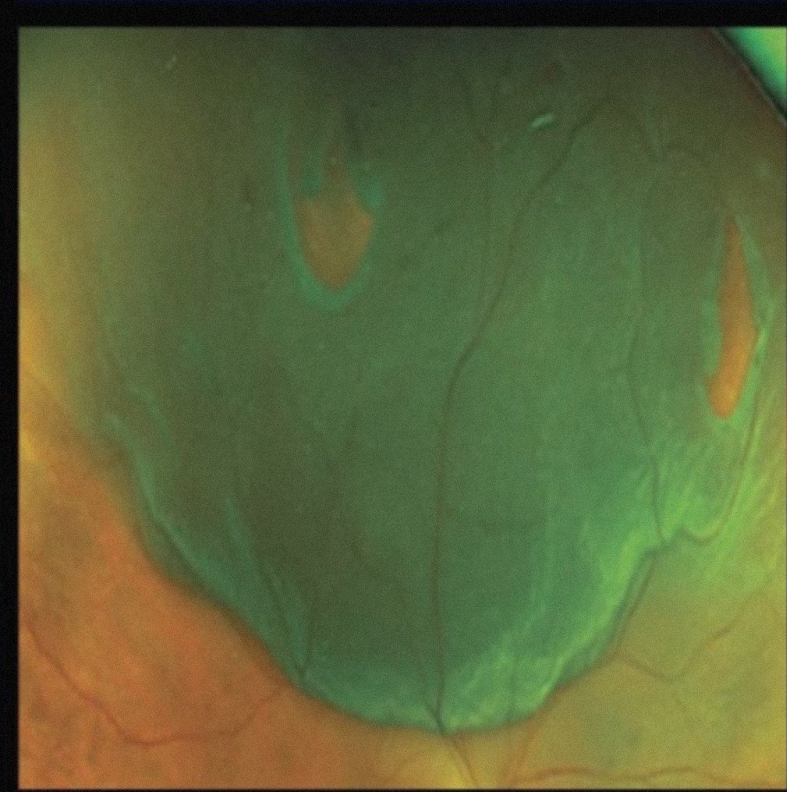
RETINAL DETACHMENT



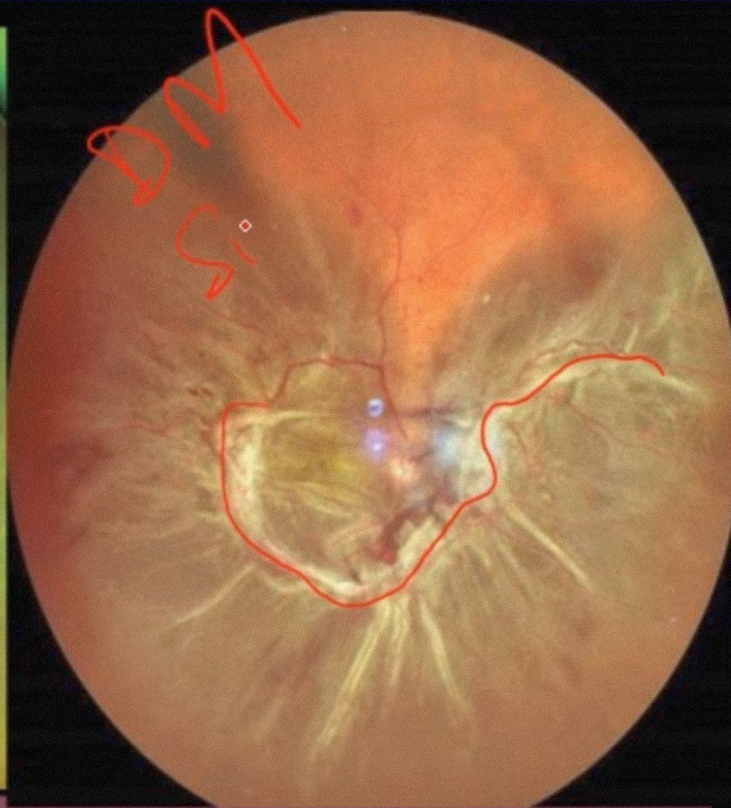
CLASSIFICATION



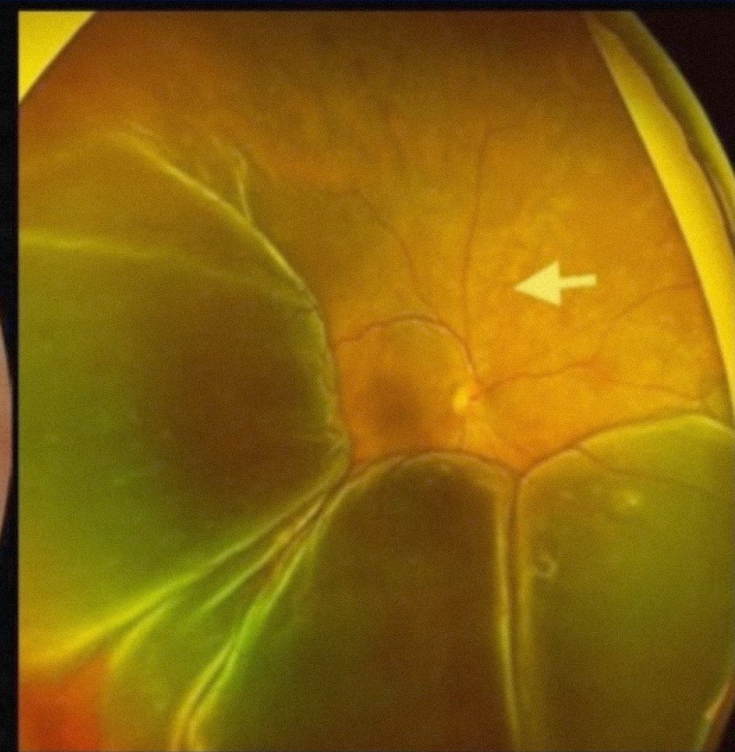
CLASSIFICATION



❖ Rhegmatogenous Retinal Detachment



❖ Tractional Retinal Detachment



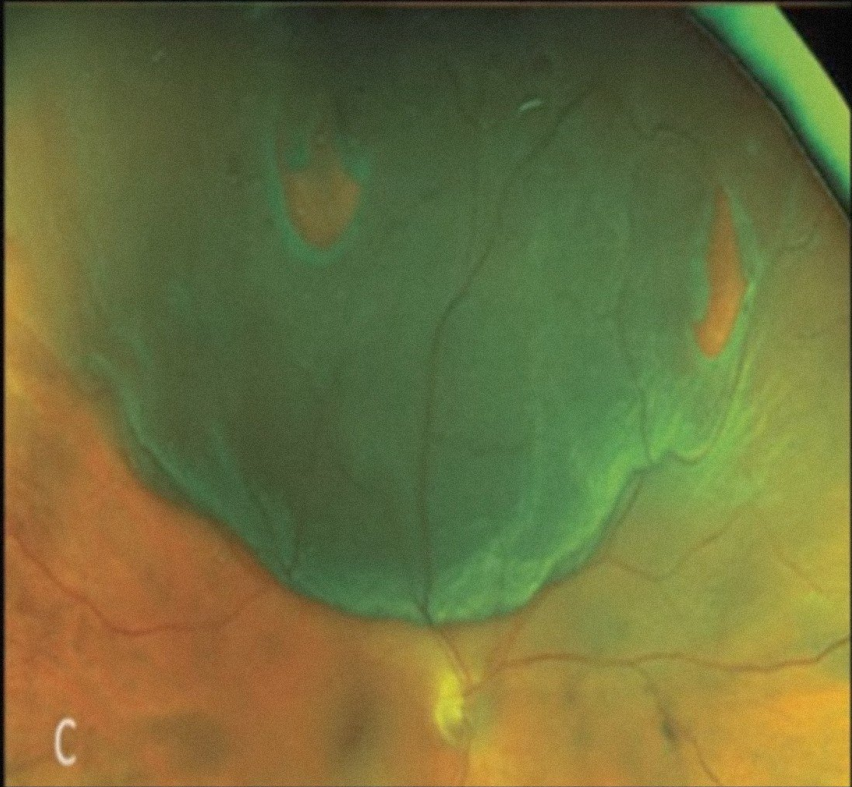
❖ Exudative retinal detachment



RHEGMATOGENOUS RETINAL DETACHMENT



- Associated with a retinal break (hole or tears).



RISK FACTORS

- Age : 40-60 years of age
- Sex : M:F → 3:2
- Myopia
- Aphakia and pseudophakia
- Retinal degenerations
- Trauma
- Posterior Vitreous Detachment (PVD) --> associated with Retinal detachment in 10 % cases



RISK FACTORS

- Age : 40-60 years of age
- Sex : M:F → 3:2
- Myopia
- Aphakia and pseudophakia
- Retinal degenerations
- Trauma
- Posterior Vitreous Detachment (PVD) --> associated with Retinal detachment in 10 % cases

- ❖ Lattice degeneration
- ❖ Snail Track degeneration
- ❖ White without pressure
- ❖ Degenerative retinoschisis
- ❖ Retinal tufts



TYPES OF RETINAL BREAKS

1. Atrophic retinal Holes
2. Operculated retinal holes
3. Horse shoes shaped tears /flap tears
4. Giant retinal Tears
5. Giant retinal dialysis

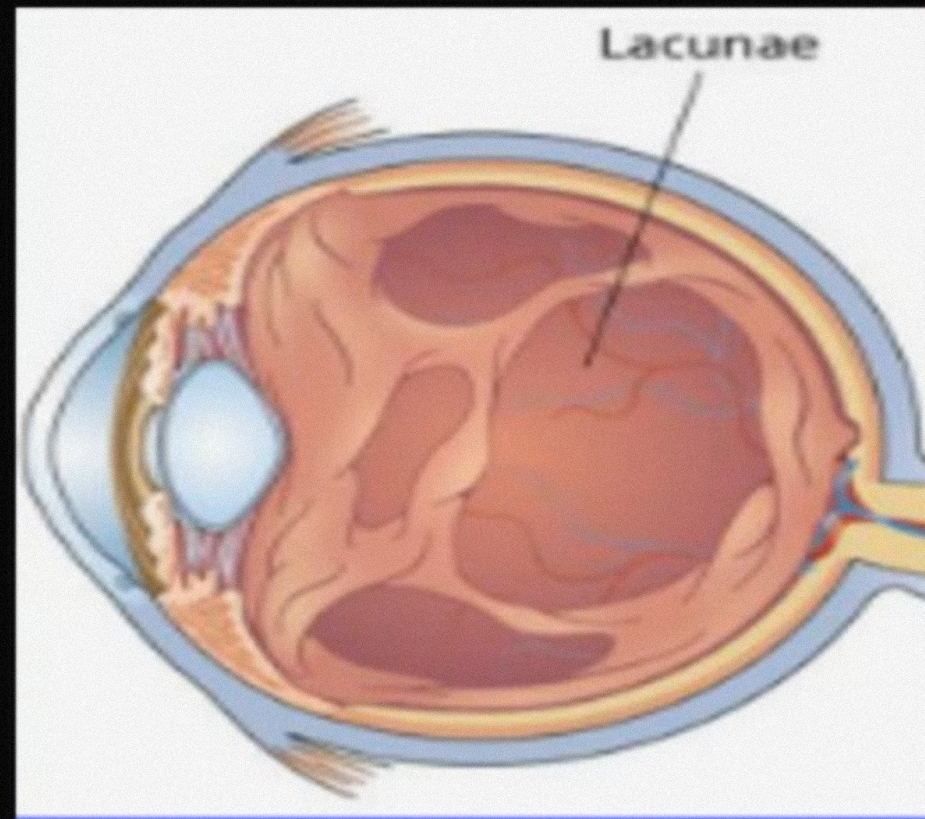


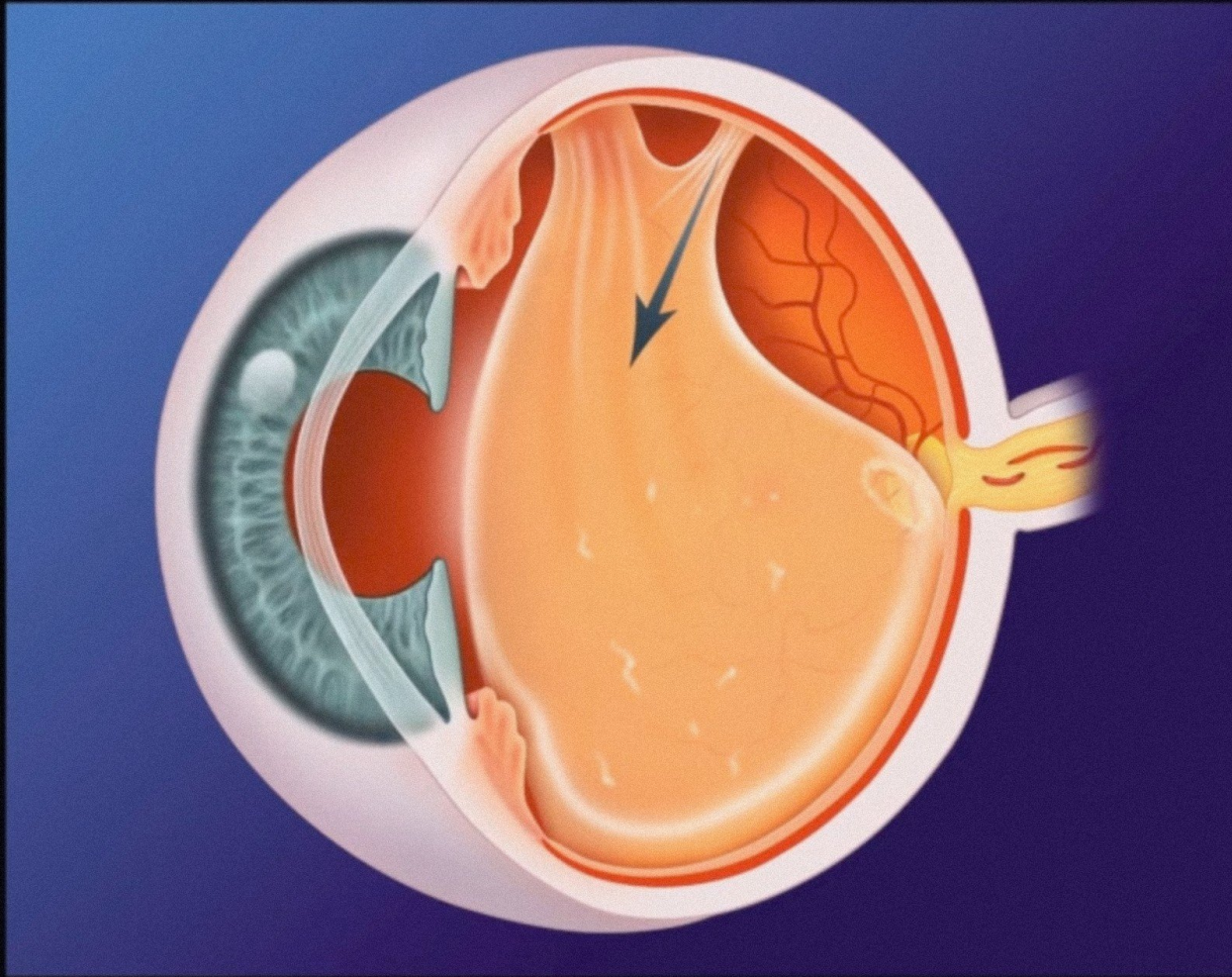
Understanding **Pathogenesis**
Of Rhegmatogenous Retinal
Detachment



DYNAMIC VITREORETINAL TRACTION

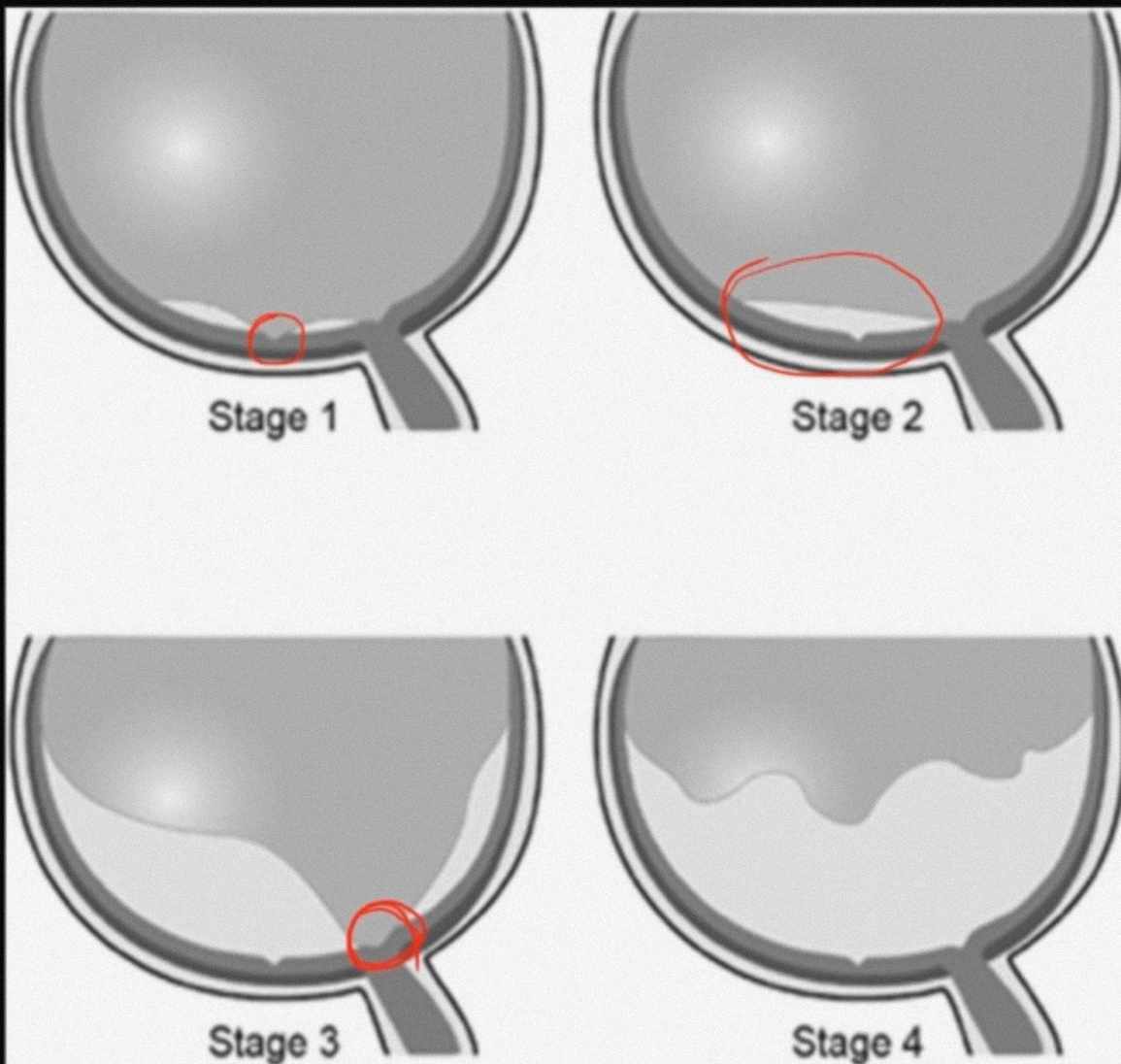
- ❖ Myopic
- ❖ Aphakia
- ❖ **Vitreous Syneresis**
- ❖ Presence of PVD





Floater
Flashes
(photopsias)





Stages of posterior vitreous detachment (PVD) during healthy aging (adapted from Johnson;² Uchino et al¹²).

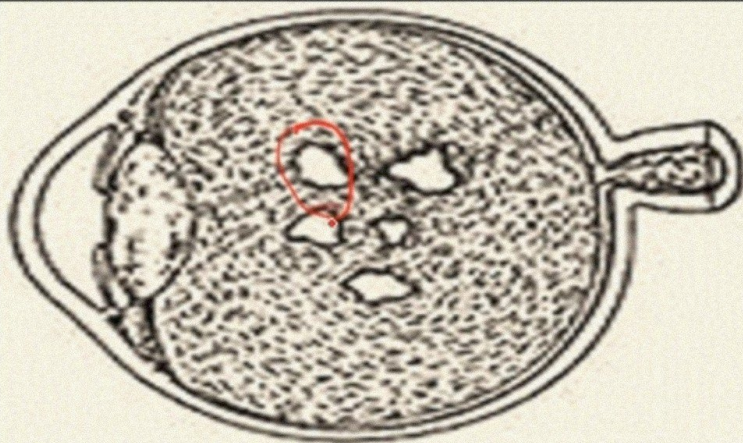
Stage 1, perifoveal vitreous detachment with residual vitreofoveal adhesion

Stage 2, perifoveal vitreous detachment with persistent attachment to the optic disc but without vitreofoveal adhesion

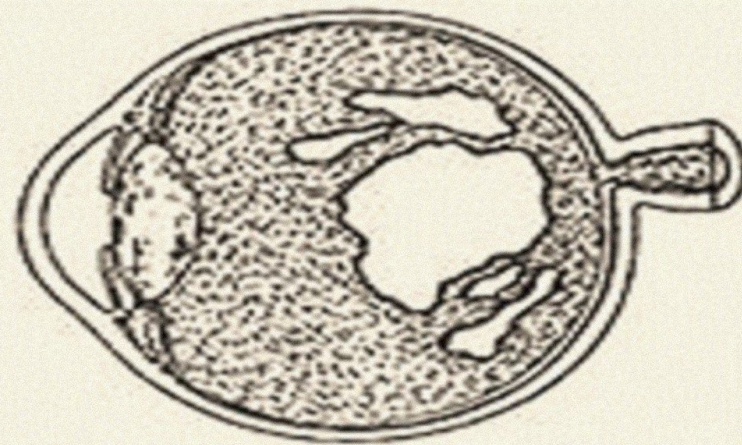
Stage 3, near-complete PVD with only vitreopapillary adhesion remaining

Stage 4, complete PVD.

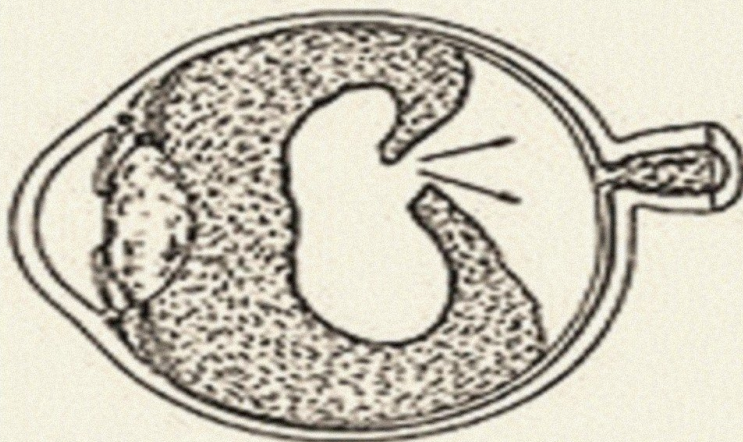




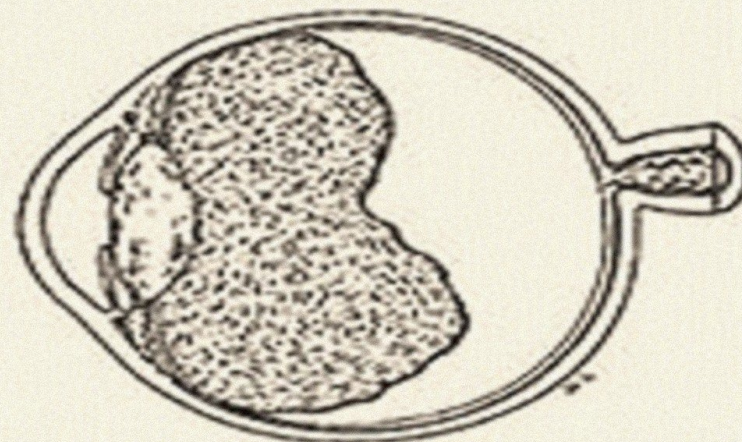
Early liquefaction



Extensive liquefaction



Partial PVD



"Complete" PVD



Perifoveal VD

**Perifoveal + Foveal
VD**

Stage 1

Stage 2

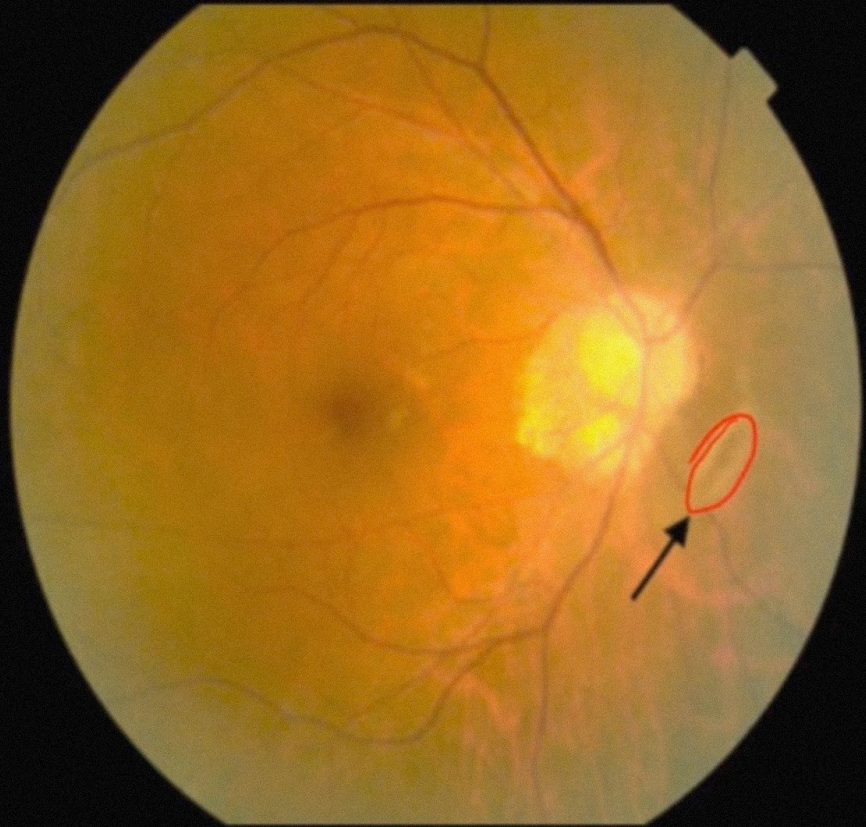
**Near-complete PVD
with only
vitreopapillary
adhesion**

Complete PVD

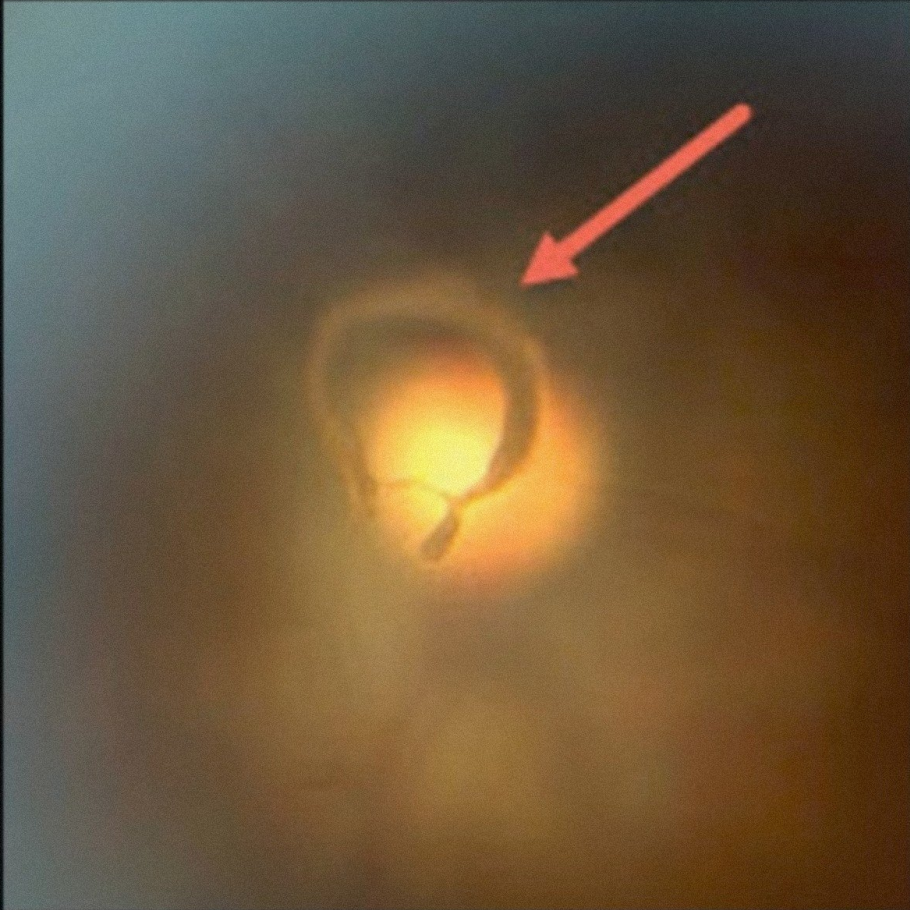
Stage 3

Stage 4





WEISS RING



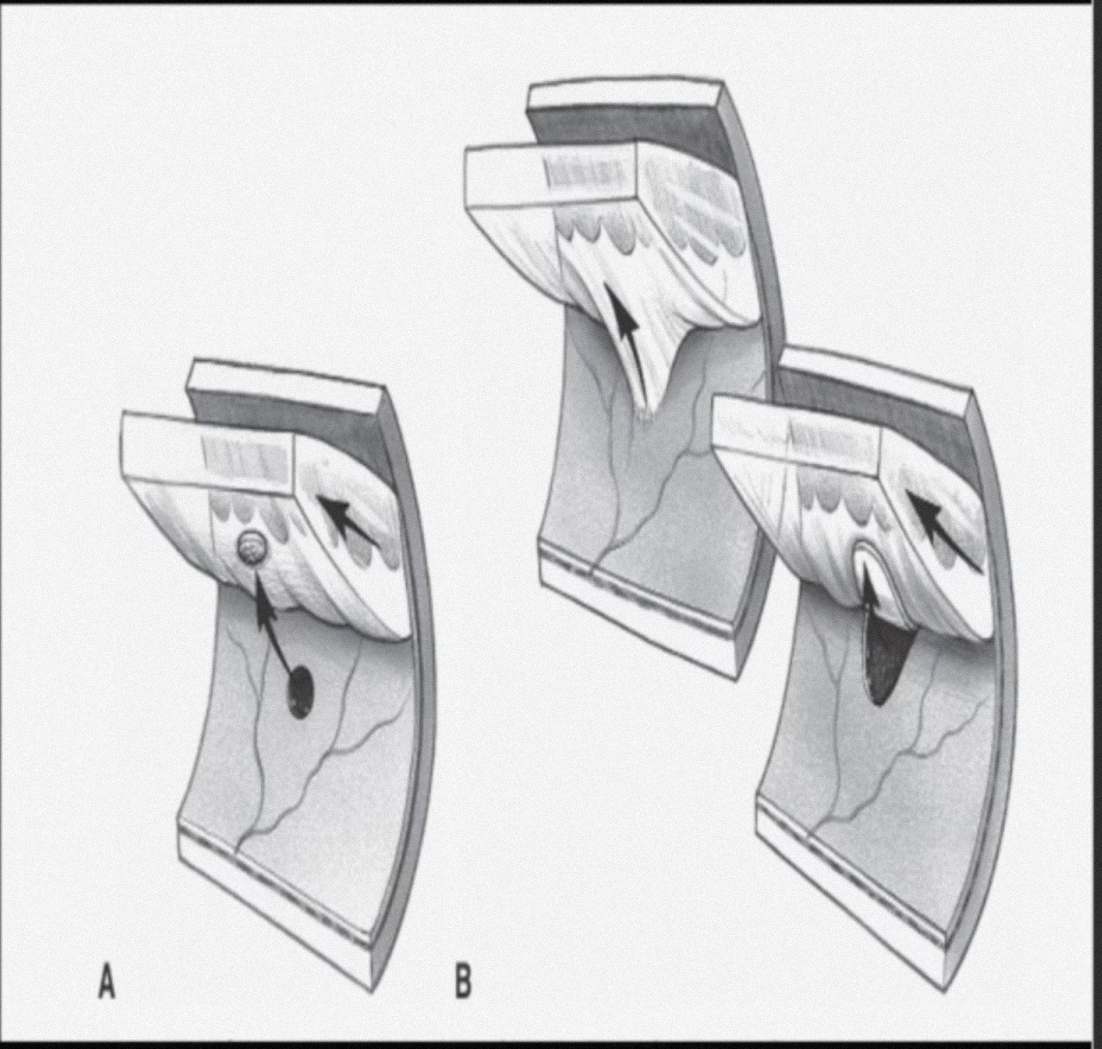
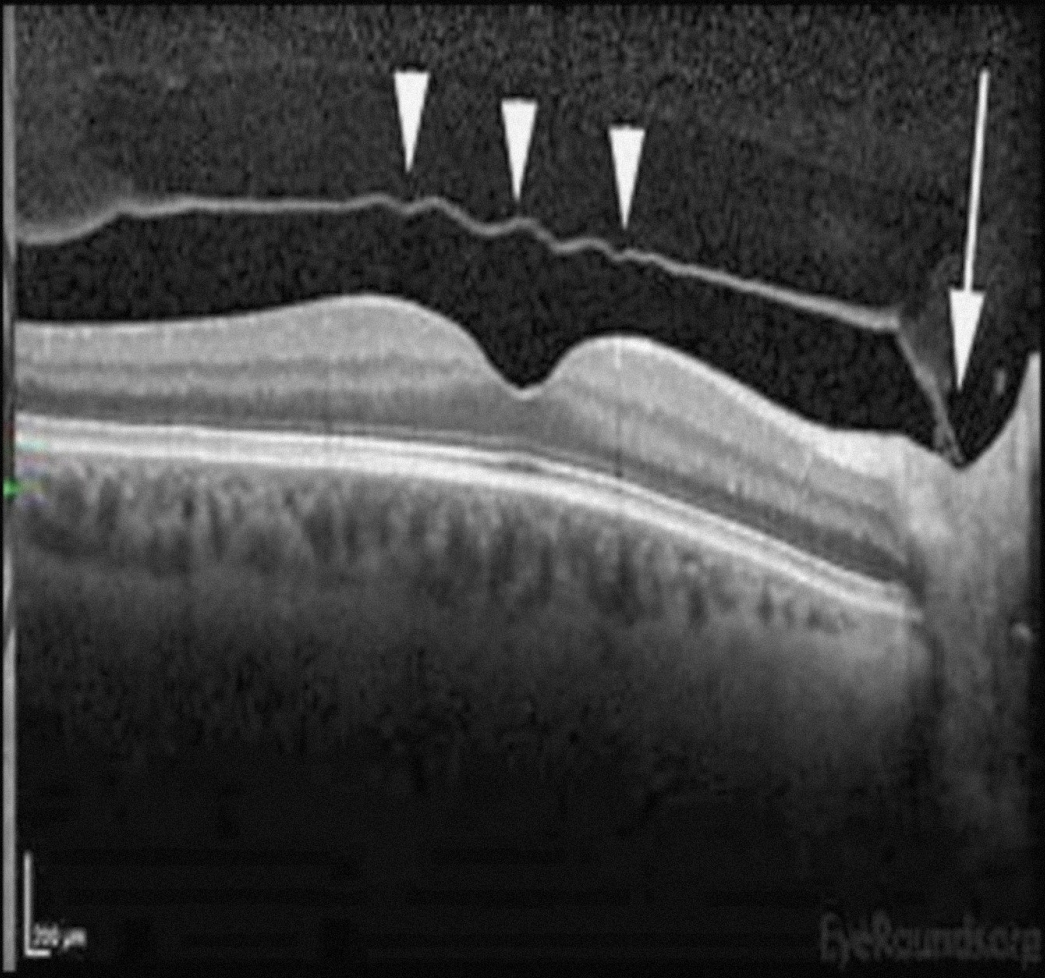
DYNAMIC VITREORETINAL TRACTION

- ❖ Myopic
- ❖ Aphakia
- ❖ **Vitreous Syneresis**
- ❖ **Presence of PVD**

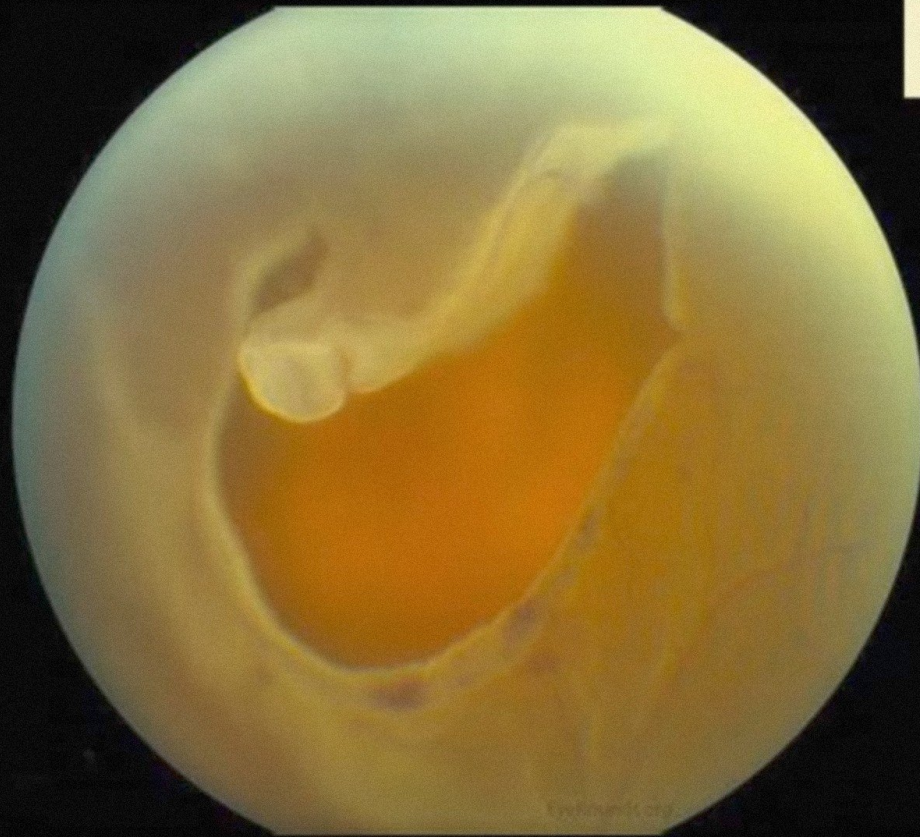
**RETINAL
BREAK**

Fluid enters the
Subretinal space
and accumulates
leading to RD

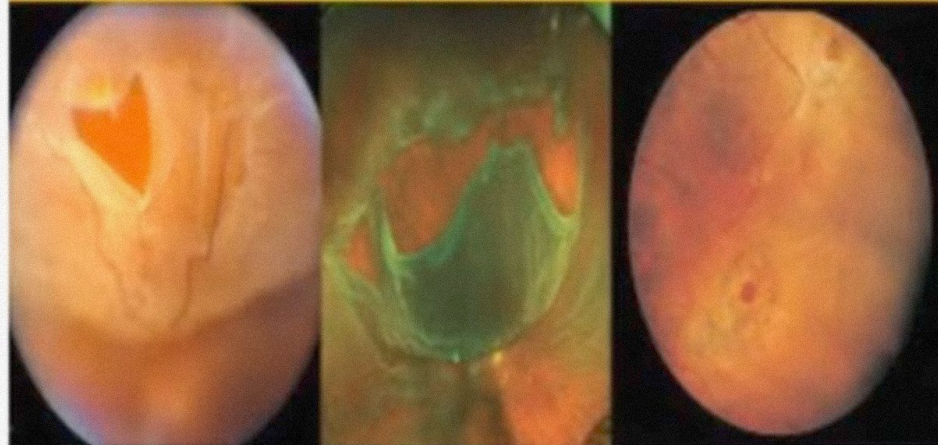




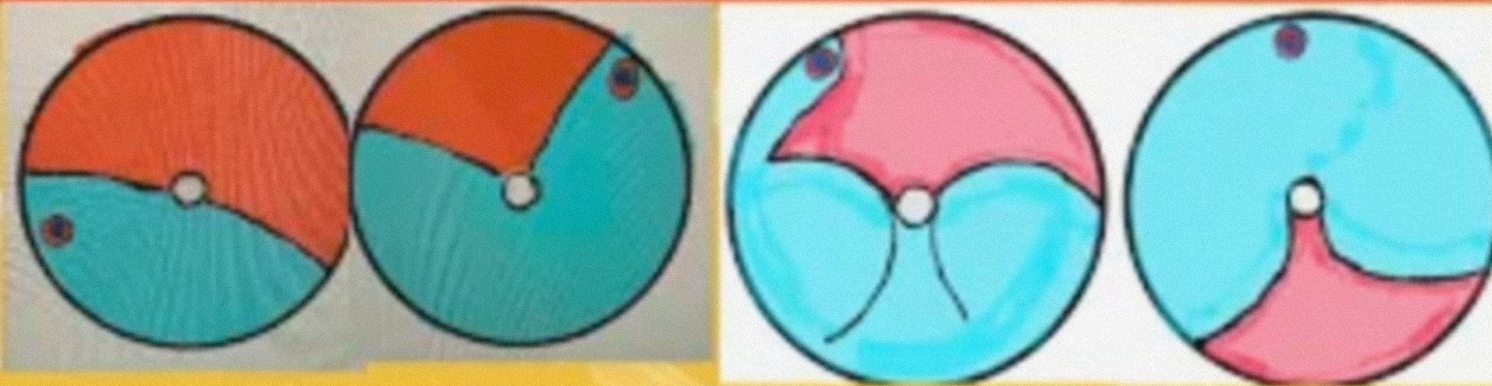
Fluid seeps into the subretinal space
leading to detachment



RETINAL TEARS AND HOLES



HOW TO LOCALISE A RETINAL BREAK?



LINCOFF RULES WITH LOGIC

Video link

<https://youtu.be/Z0gG1Fr-VSU>



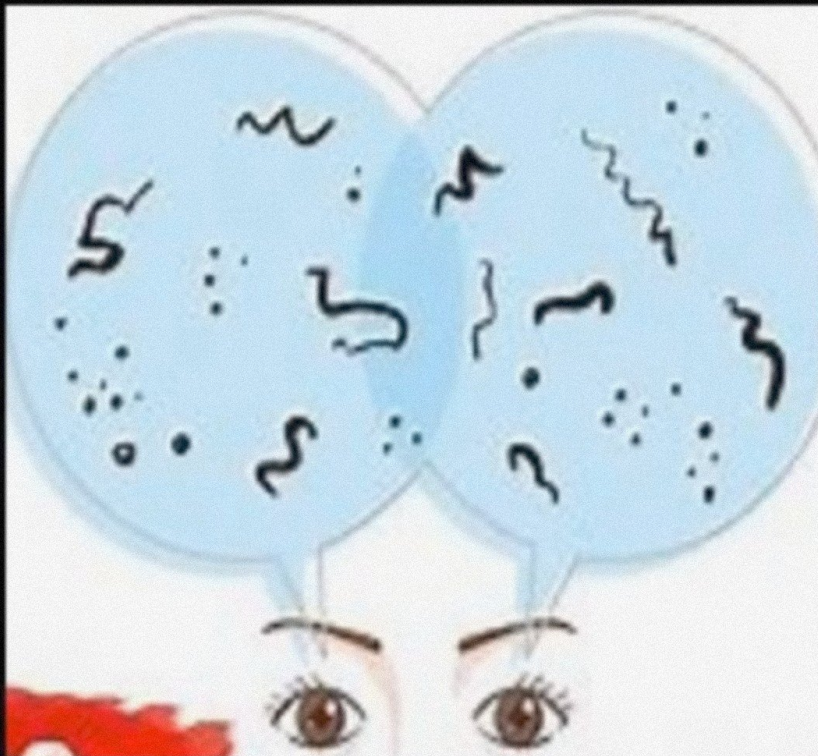
Lincoff Rules



SIGNS AND SYMPTOMS



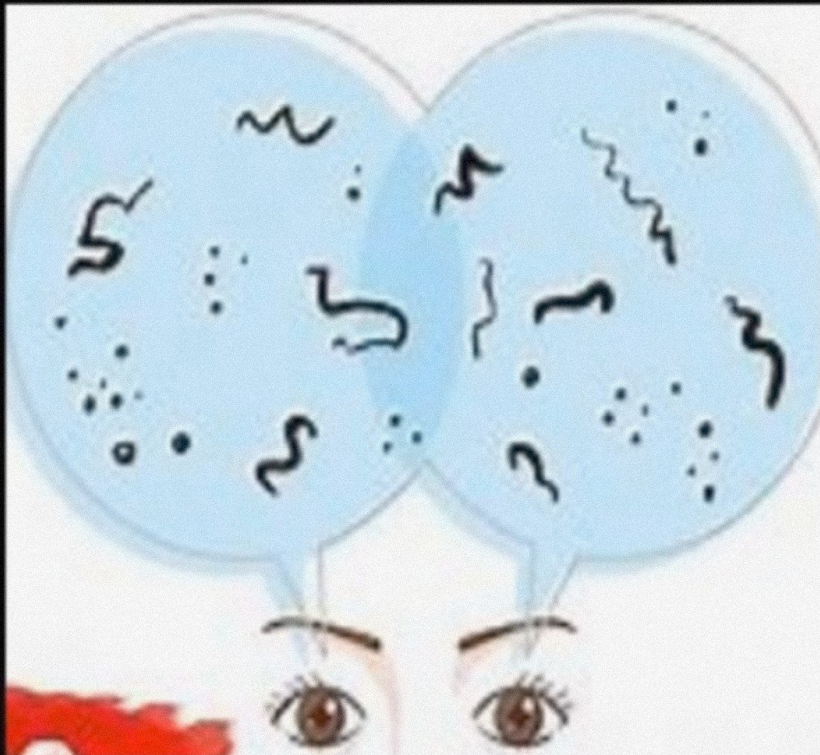
PRODROMAL SYMPTOMS



- Dark Spots :- **FLOATERS**
- **PHOTOPSIAS** : Sensation of flashes of light (due to irritation of retina by vitreous movemnnents)

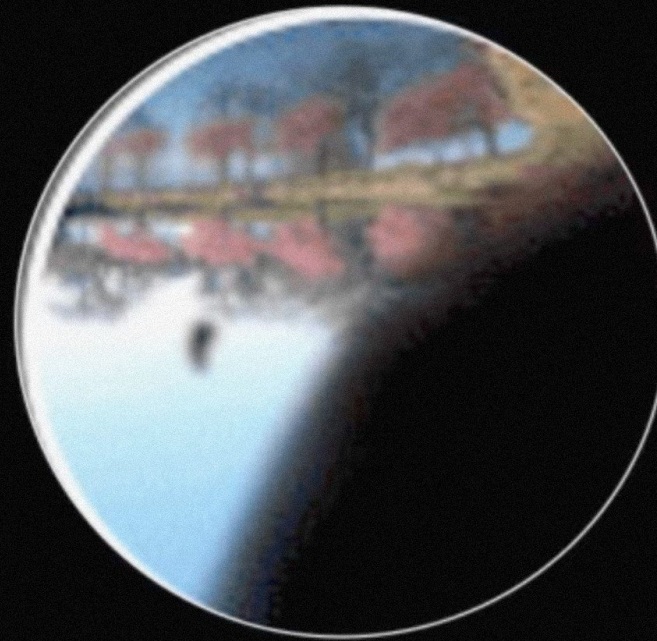


PRODROMAL SYMPTOMS



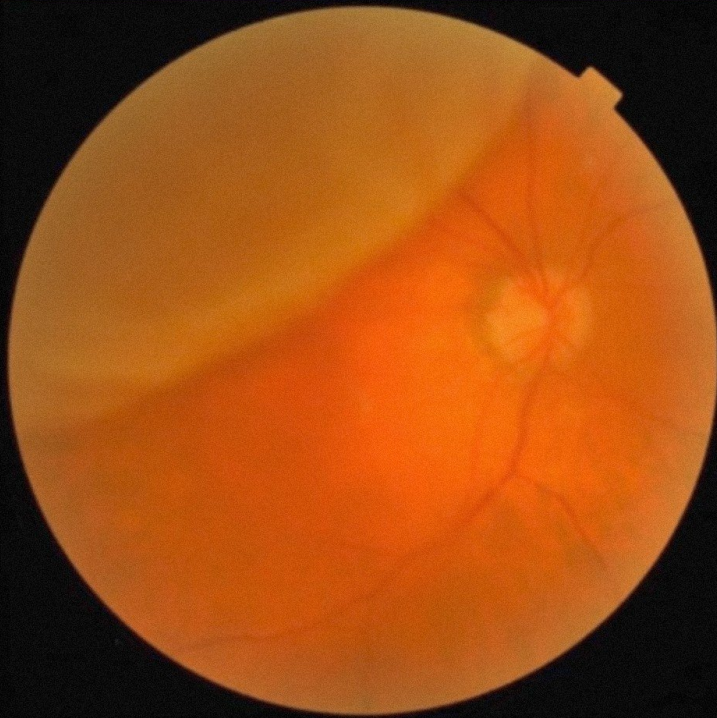
SYMPTOMS OF DETACHED RETINA

- Localised relative loss of field of vision



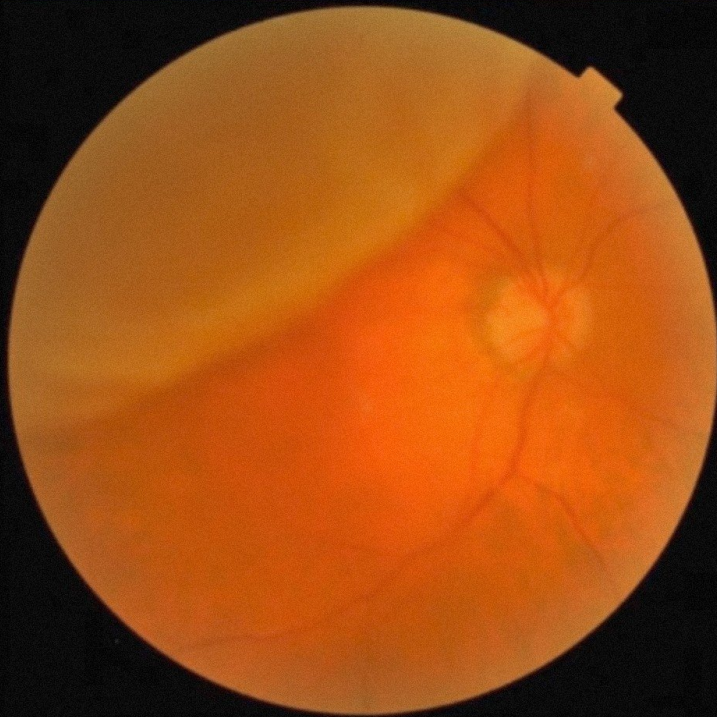
SYMPTOMS OF DETACHED RETINA

Sudden painless loss of vision



SYMPTOMS OF DETACHED RETINA

Sudden painless loss of vision



Sudden appearance of a dark cloud, Veil /curtain in front of the eye!



TRIVIA TIME ?

- What are the other Causes of sudden painless loss of Vision ?

COMRASH

C = CRAO, BRAO, CRVO, BRVO
O = Optic Neuritis
M = Methyl Alcohol Amblyopia
R = Retinal Detachment
A = ARMD (Exudative Type)
S = Subluxation of lens
H = Hemorrhage (vitreous)

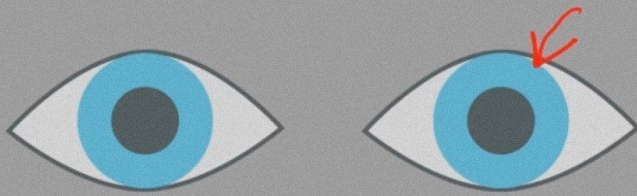




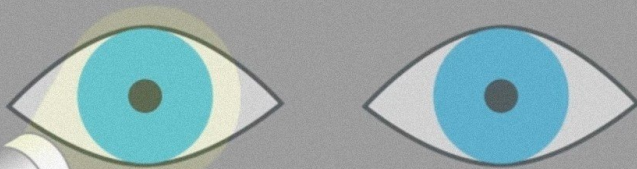
SIGNS OF RD



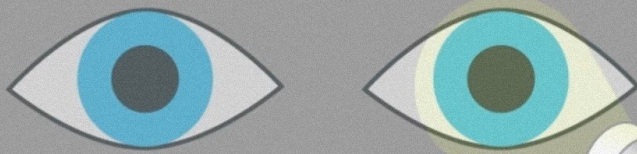
Relative Afferent Pupillary Defect
(Left sided defect)



Start with a DARK room



Shining torch in RIGHT eye
Bilateral pupillary constriction

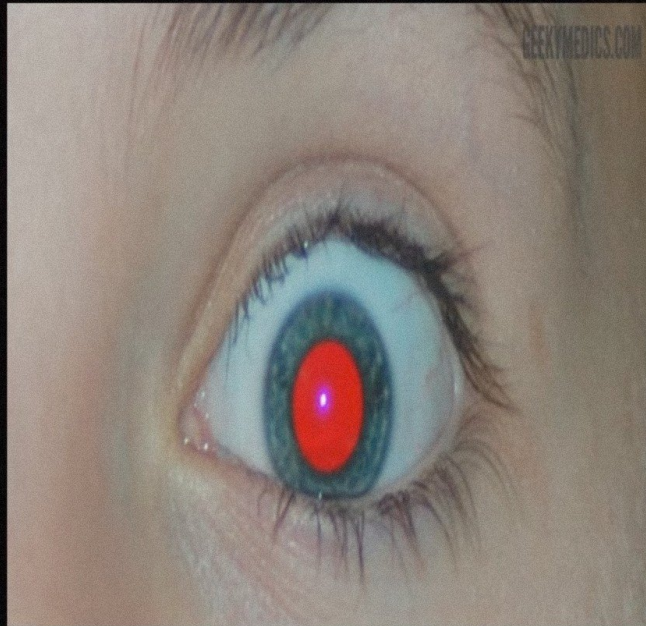
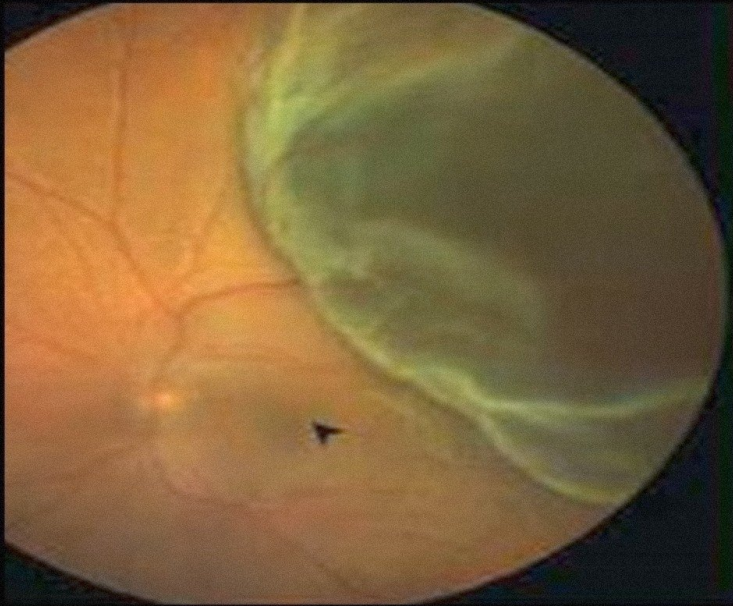


Shining torch in LEFT eye
Bilateral pupillary Dilatation

- External Examination : Eyes look Normal
- Intraocular Pressure : **Hypotonia**
- **MARCUS GUNN PUPIL** : Relative Afferent pupillary Defect



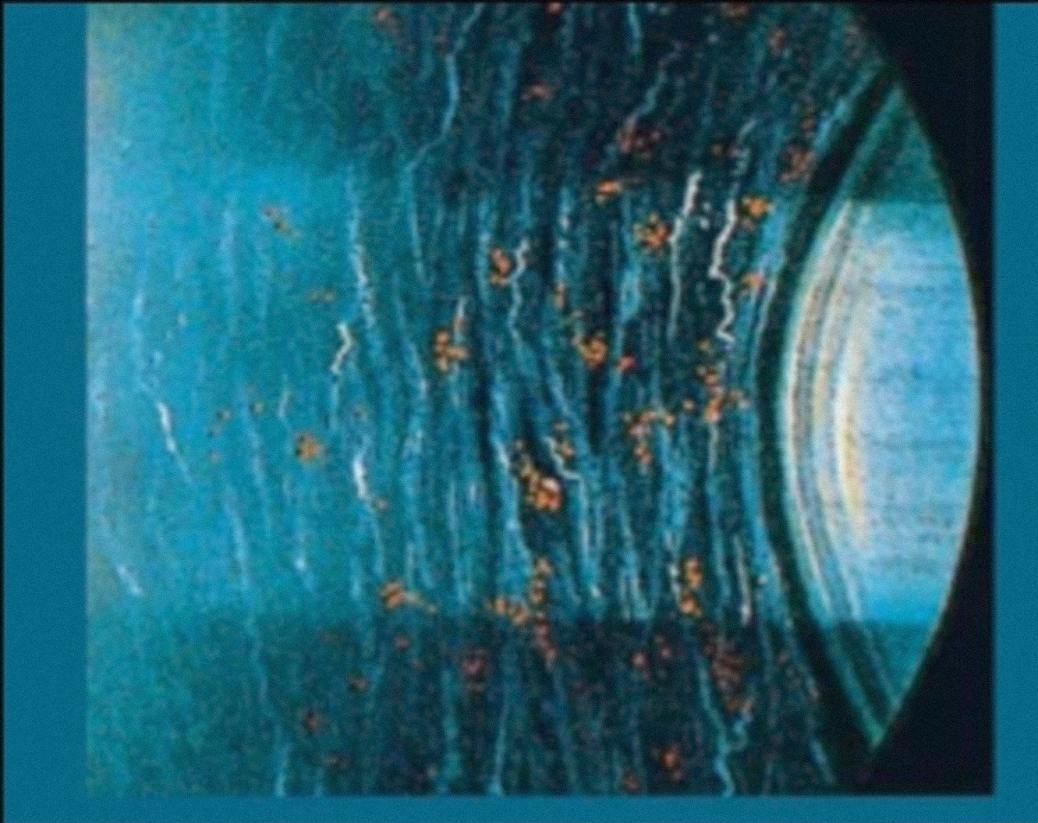
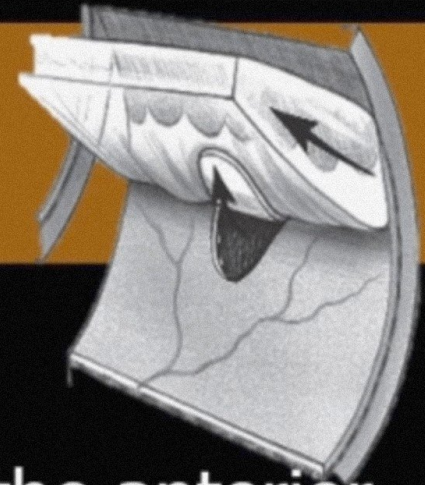
PLANE MIRROR EXAMINATION /DISTANT DIRECT OPHTHALMOSCOPY



Altered red reflex → Greyish reflex in the quadrant
of detached retina



SHAFFER SIGN



- Pigment in the anterior vitreous (tobacco dusting)
- The shearing force of the break in the retinal pigment epithelium (RPE)



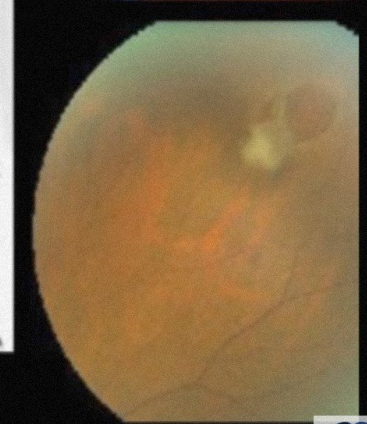
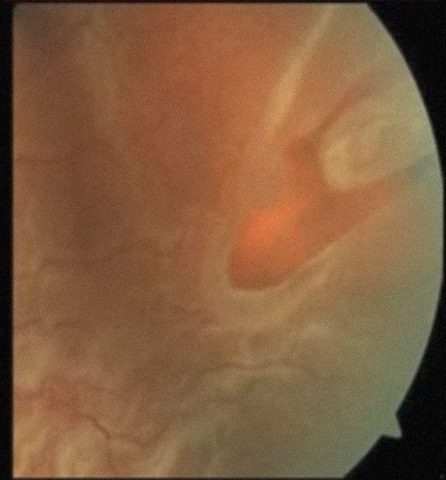
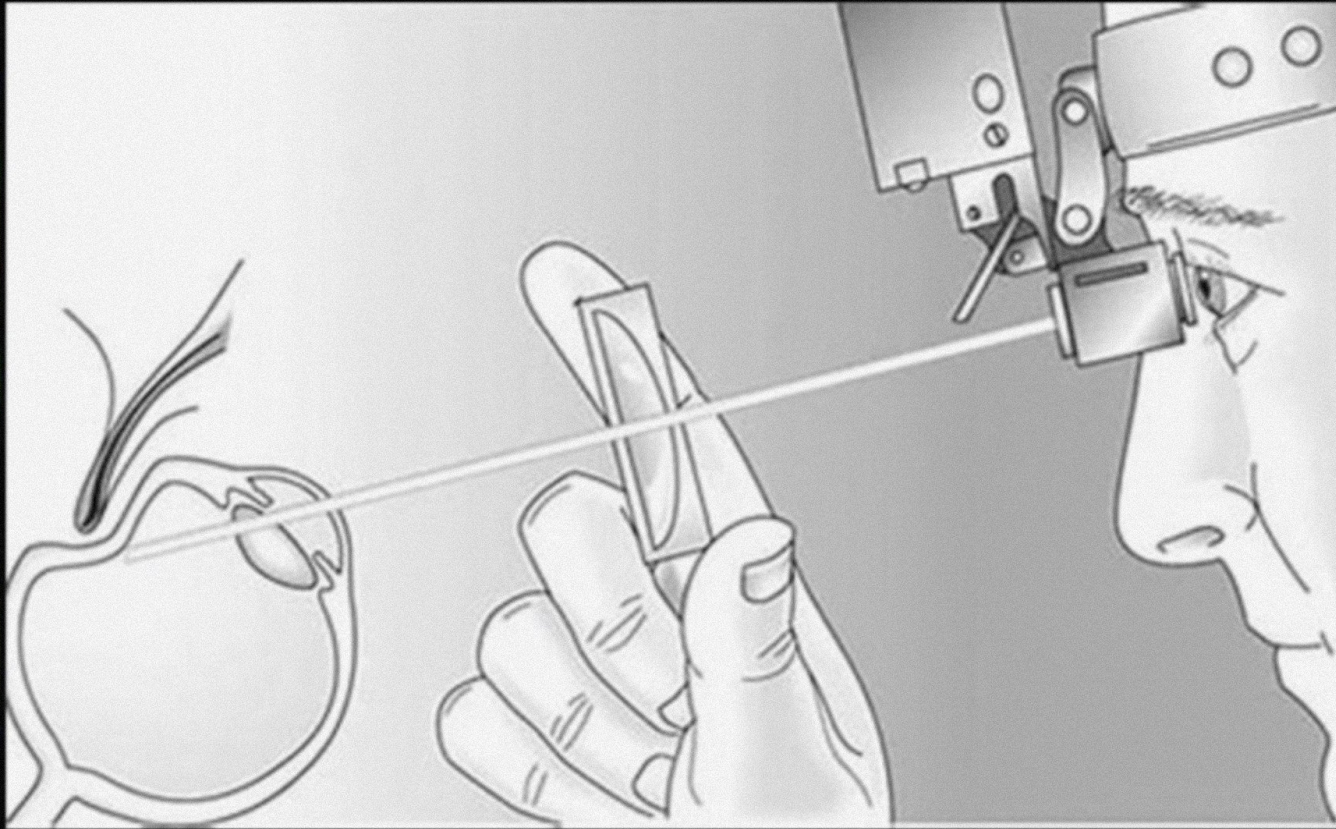
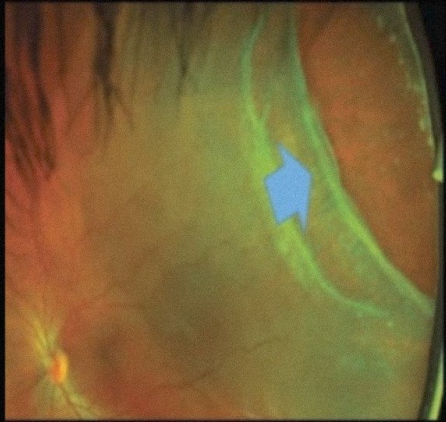


Shaffer
sign
↓

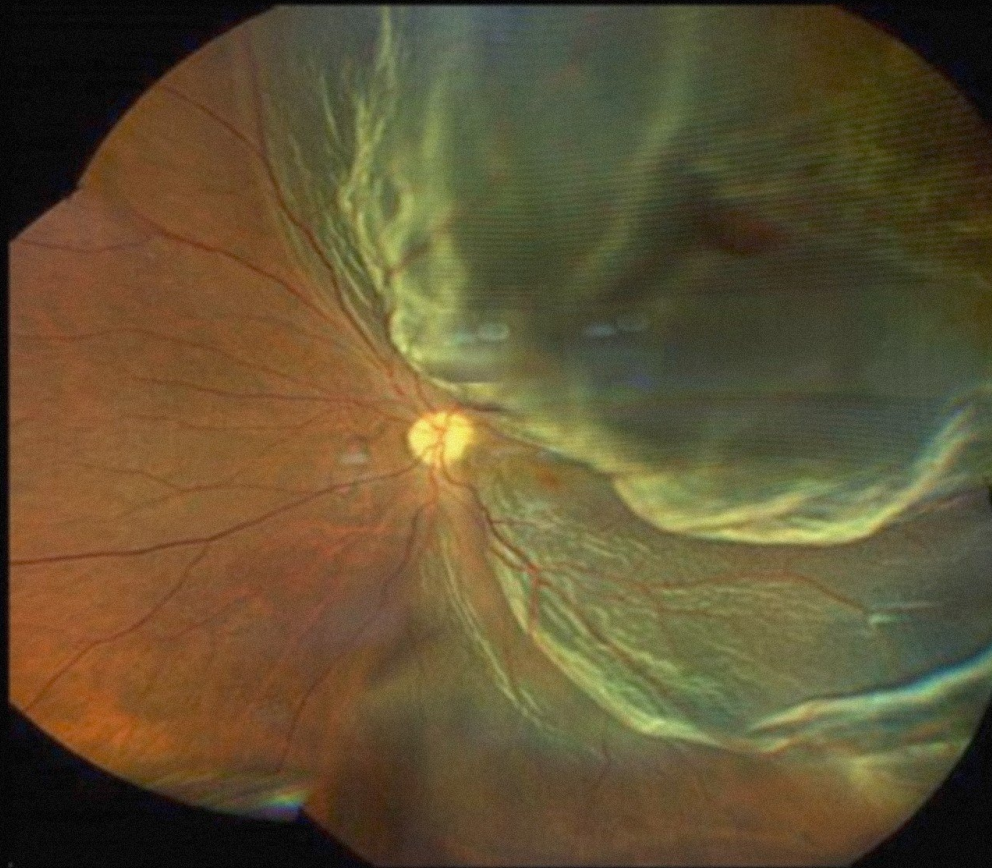
PATHOGNOMIC OF RETINA TEAR



INDIRECT OPHTHALMOSCOPY WITH SCLERAL INDENTATION



FRESH RETINAL DETACHMENT V/S OLD RETINAL DETACHMENT



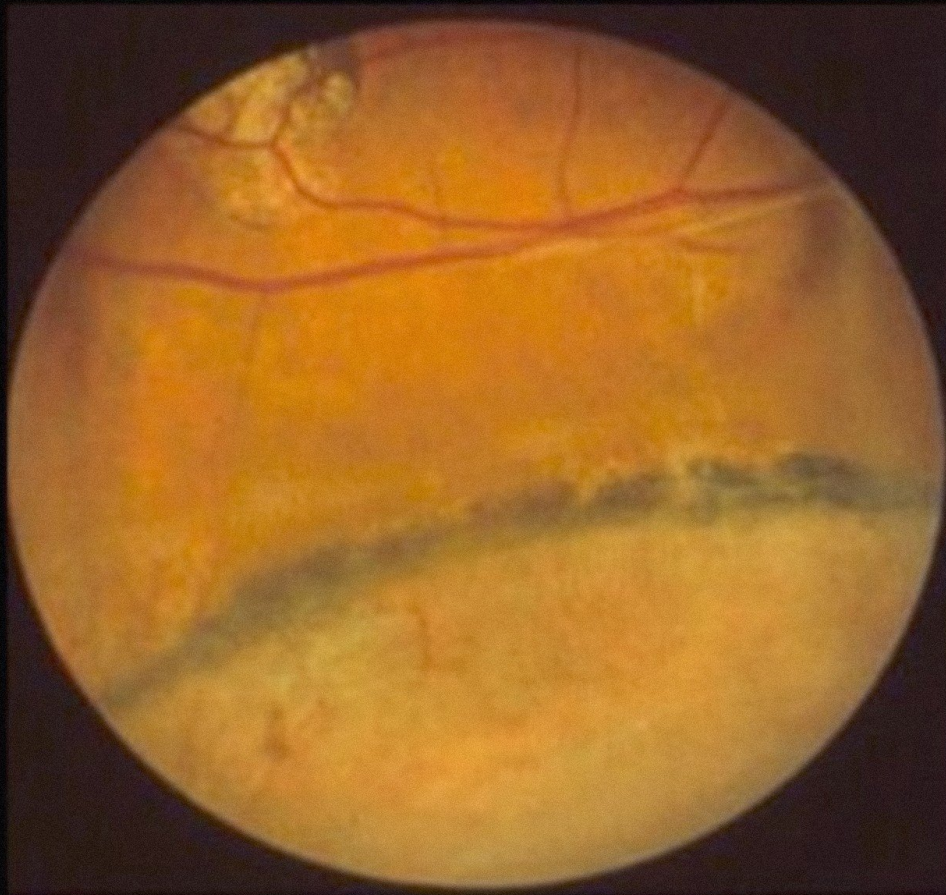
- FRESH RD
- Greyish reflex instead of normal pink
- Raised anteriorly
- Thrown into folds (undulations)
- Oscillates with the movement of the eye
- Retinal vessels appear as dark red tortuous cords oscillating with movement



Large balloon like
bullous retinal
detachment



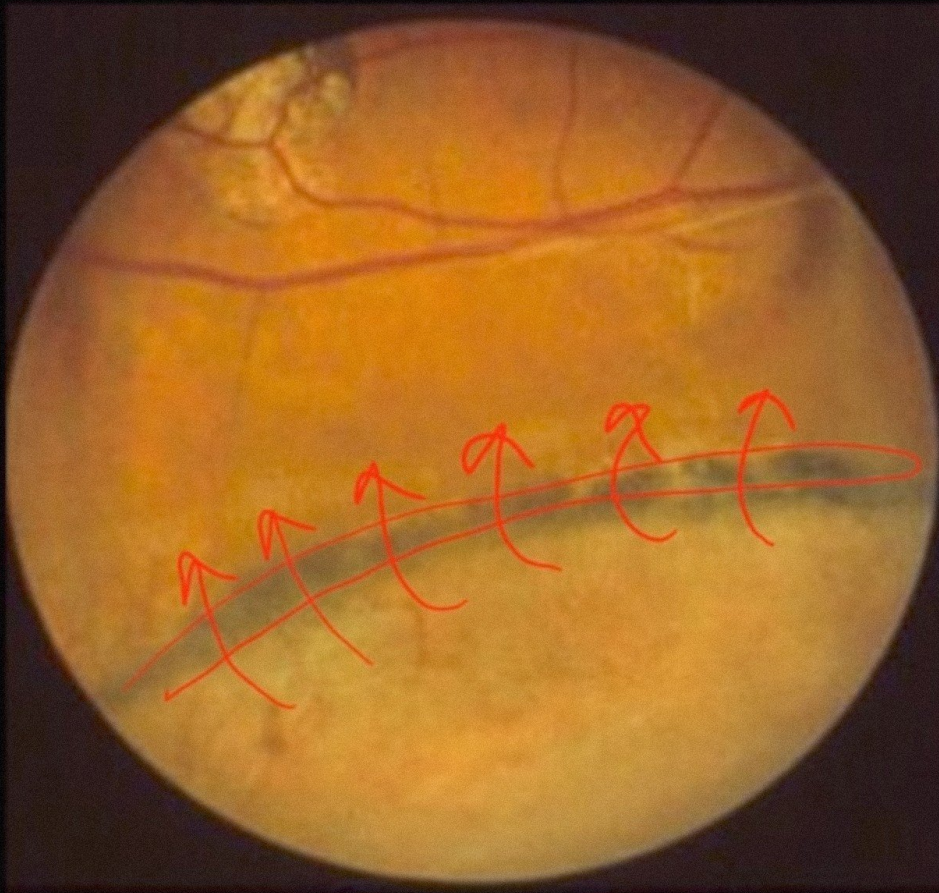
FRESH RETINAL DETACHMENT V/S OLD RETINAL DETACHMENT



- OLD RD
- Thinning of retina due to atrophy
- Subretinal Demarcation lines (high water marks)



FRESH RETINAL DETACHMENT V/S OLD RETINAL DETACHMENT

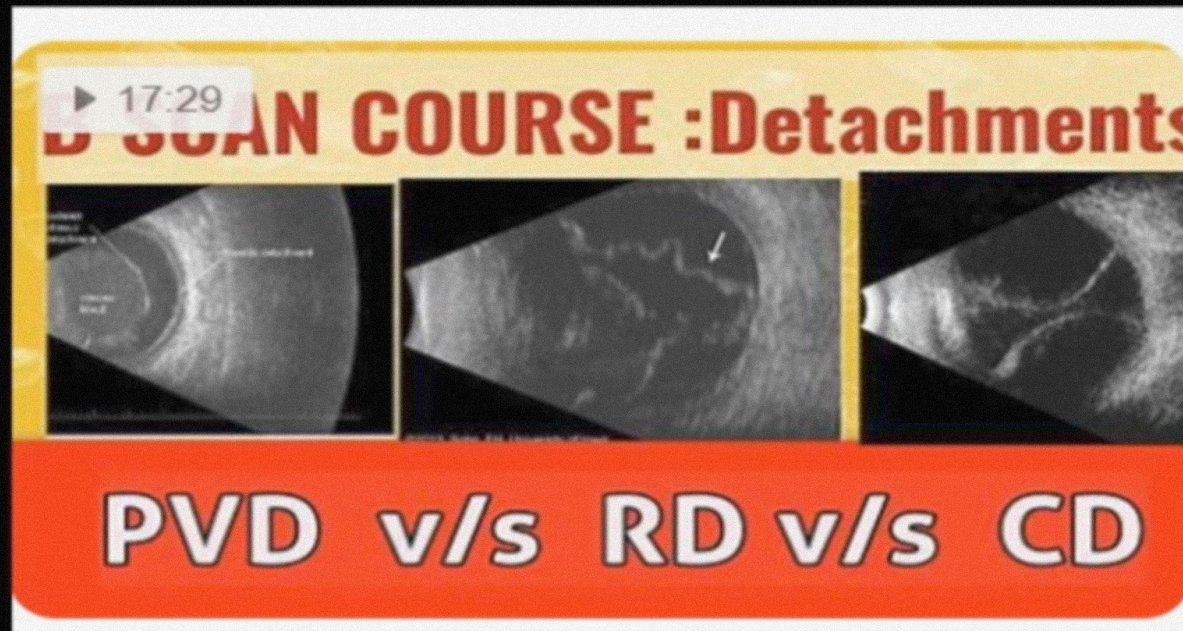


- OLD RD
- Thinning of retina due to atrophy
- Subretinal Demarcation lines (high water marks)
- Secondary intraretinal cysts formation (very old RD)

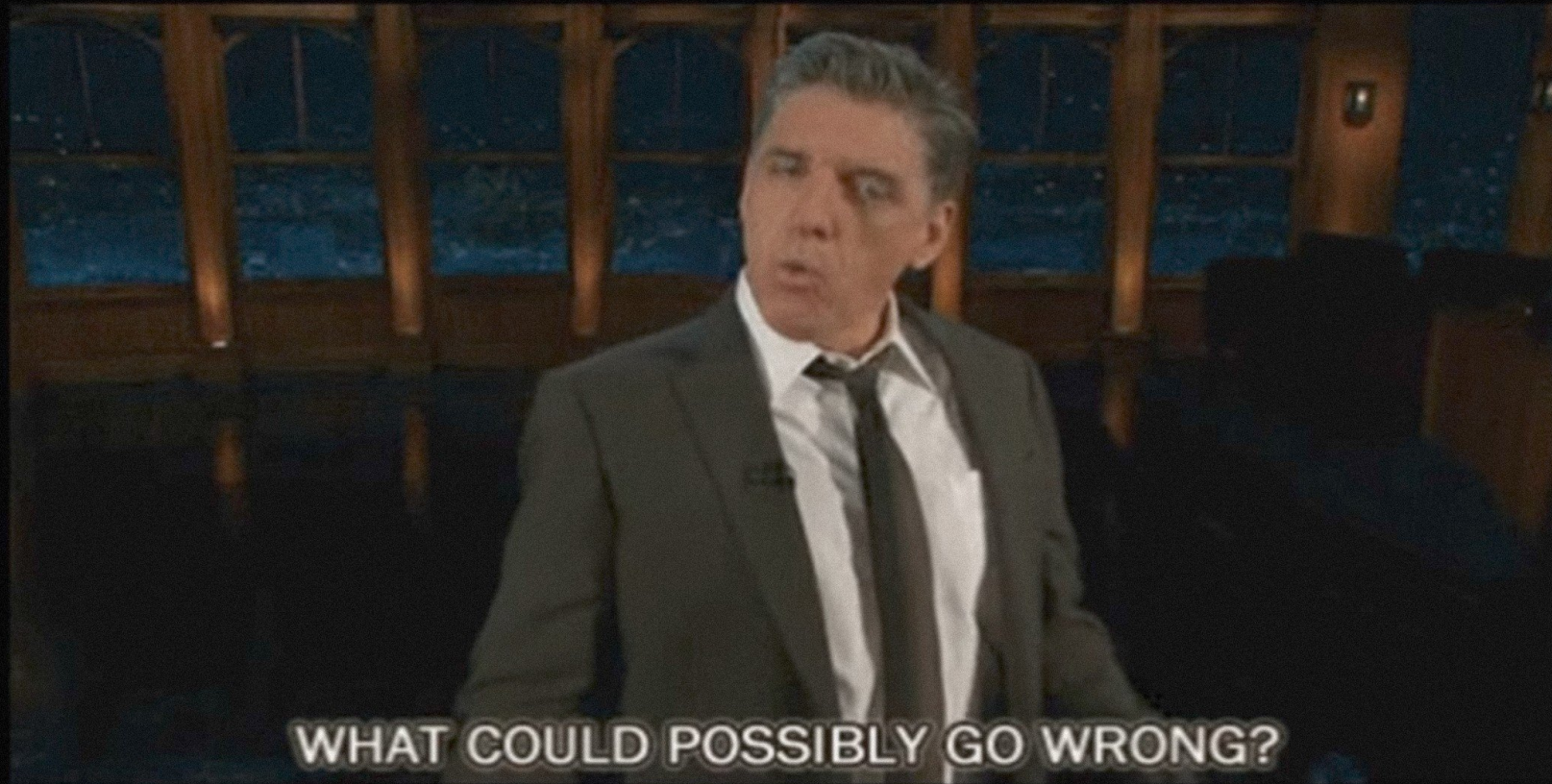


ULTRASONOGRAPHY

- Confirms the diagnosis
- Hazy media in presence of cataracts or vitreous haemorrhage



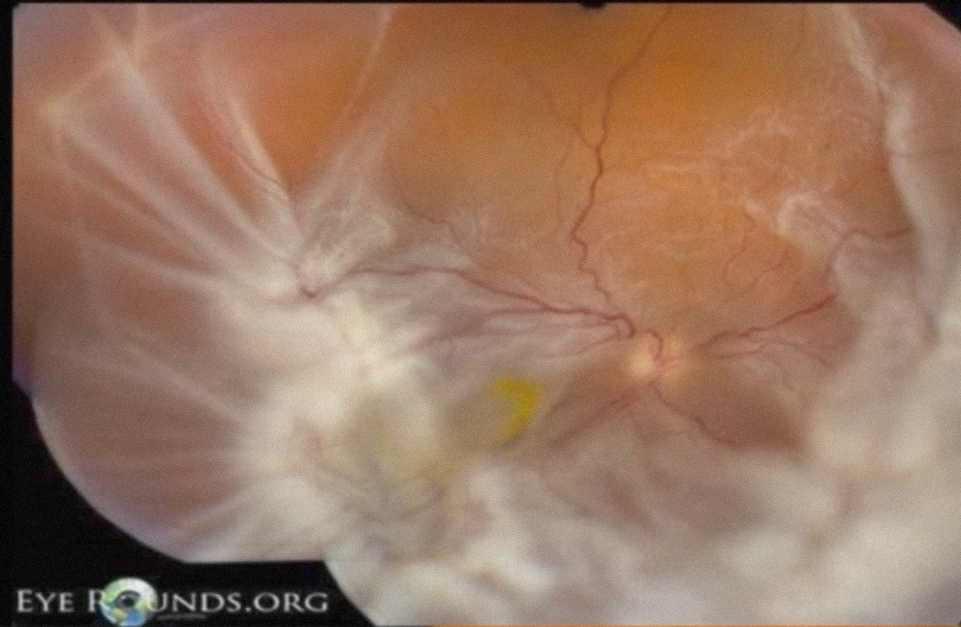
COMPLICATIONS



WHAT COULD POSSIBLY GO WRONG?



Proliferative Vitreoretinopathy



EYE ROUNDS.ORG

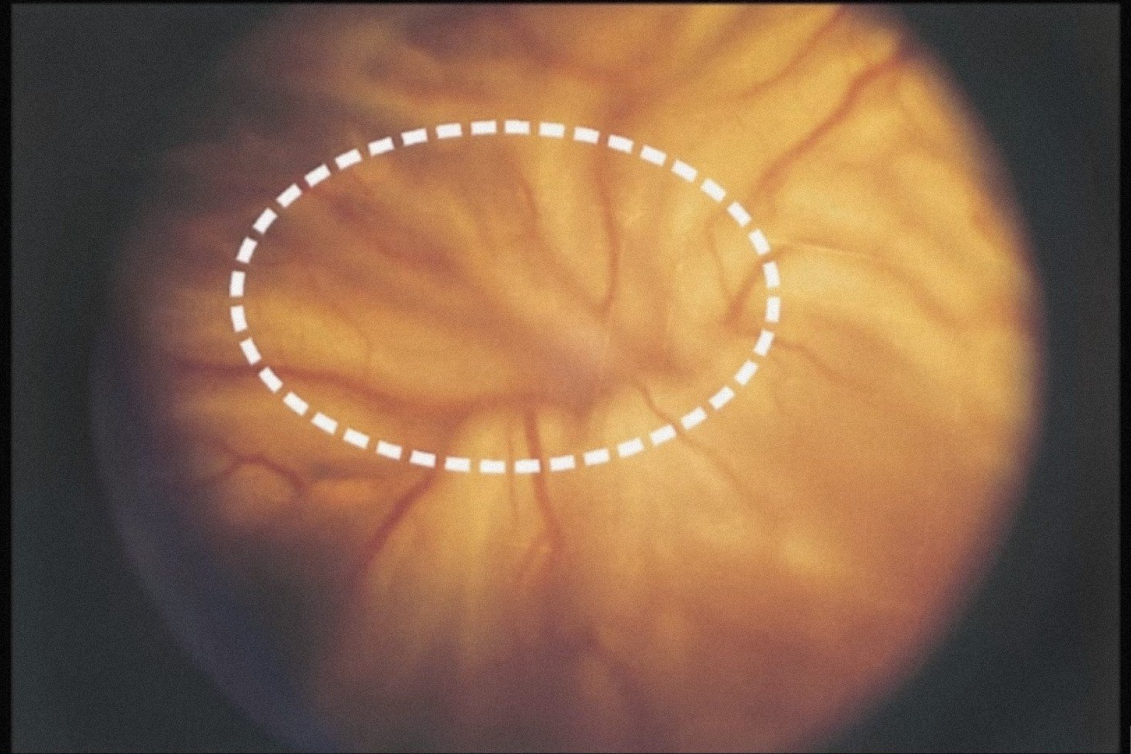
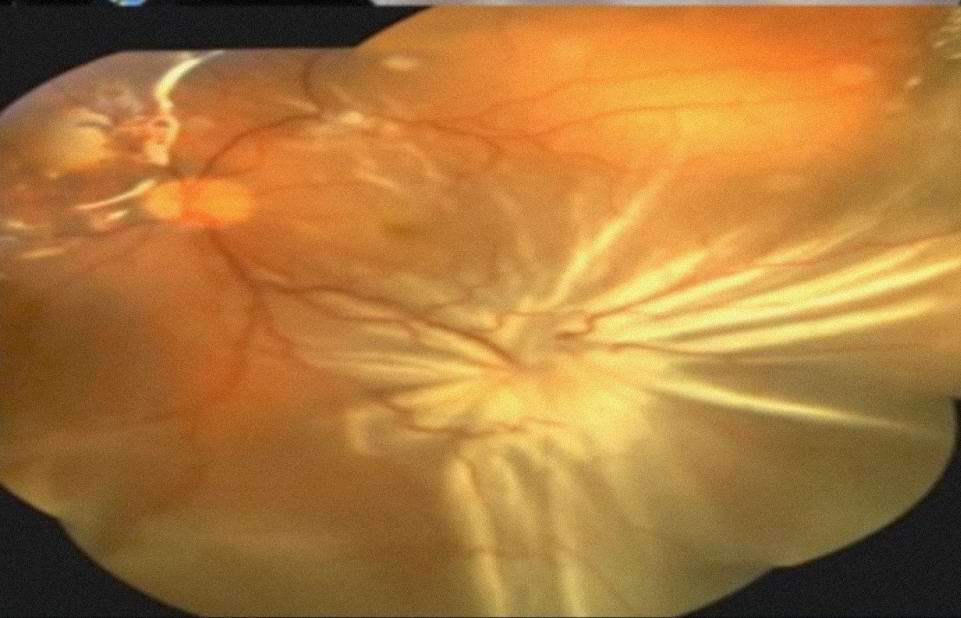
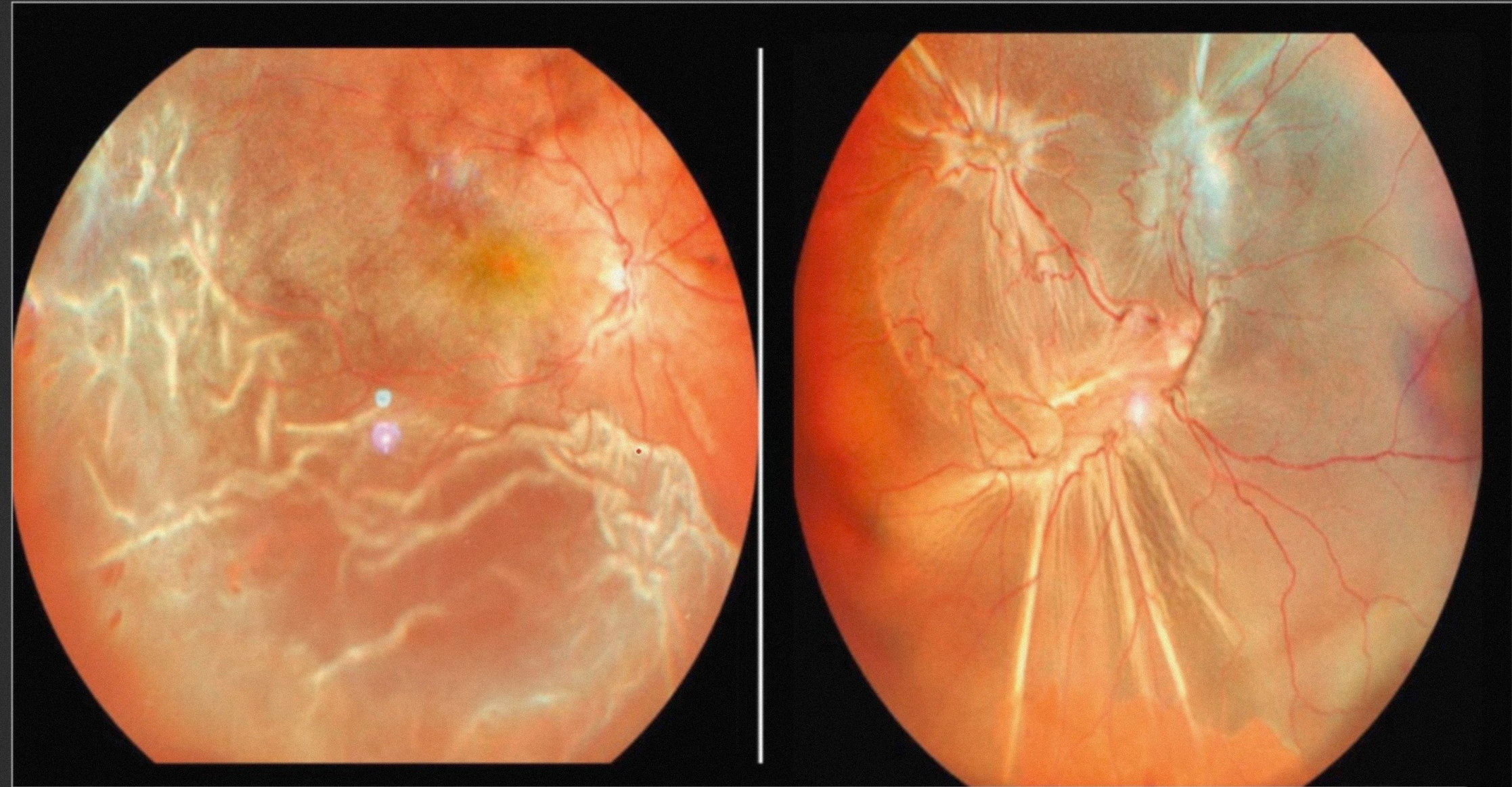


TABLE 1. RETINA SOCIETY UPDATED CLASSIFICATION OF PVR (1991)¹³

GRADE	CHARACTERISTICS
A	Vitreous haze, vitreous pigment clumps, pigment clusters on inferior retina
B	Wrinkling of the inner retinal surface, retinal stiffness, vessel tortuosity, rolled and irregular edge of retinal break, decreased mobility of vitreous
CP 1-12	Posterior to equator, focal, diffuse, or circumferential full-thickness folds, subretinal strands
CA 1-12	Anterior to equator, focal, diffuse, or circumferential full-thickness folds, subretinal strands, anterior displacement, condensed vitreous strands



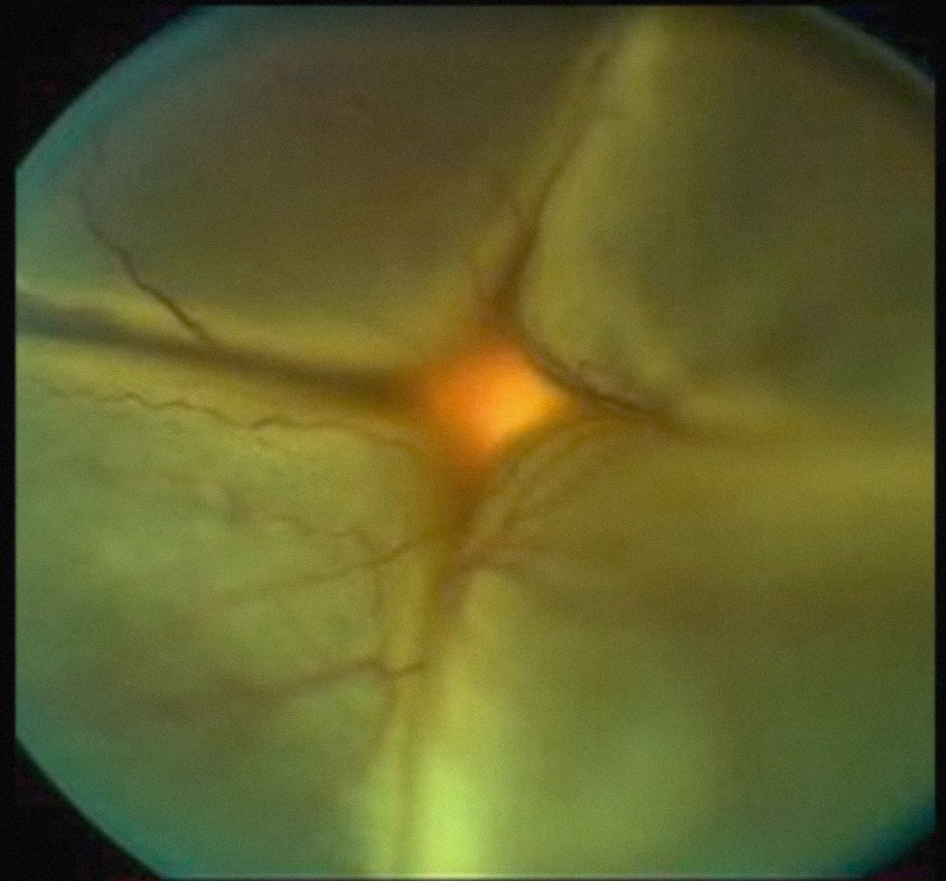
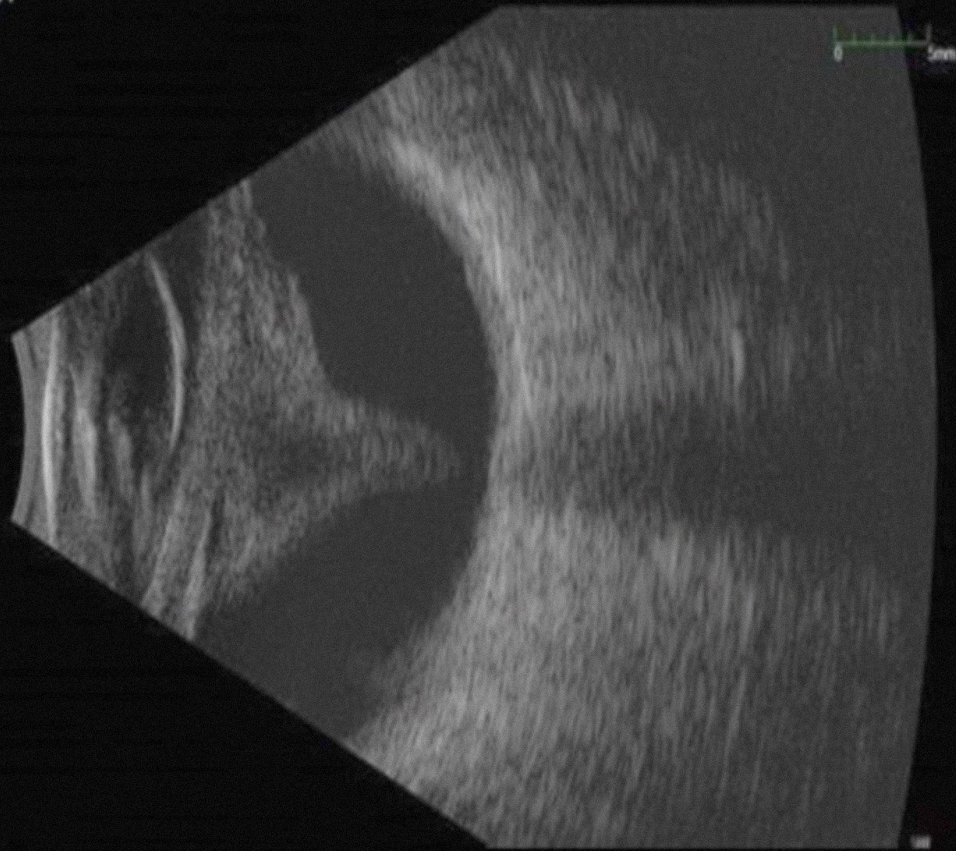


Wide-field color fundus photograph showing total retinal detachment... | [Download Scientific Diagram \(researchgate.net\)](#)



Funnel Shaped Retinal Detachments

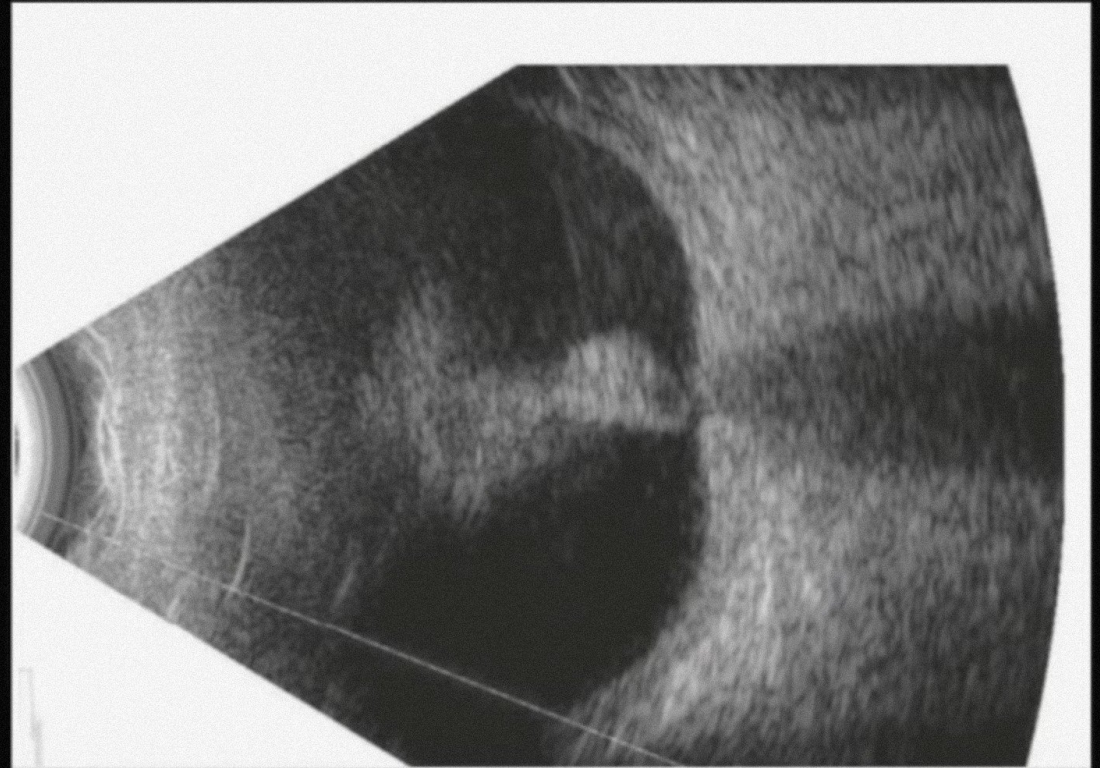
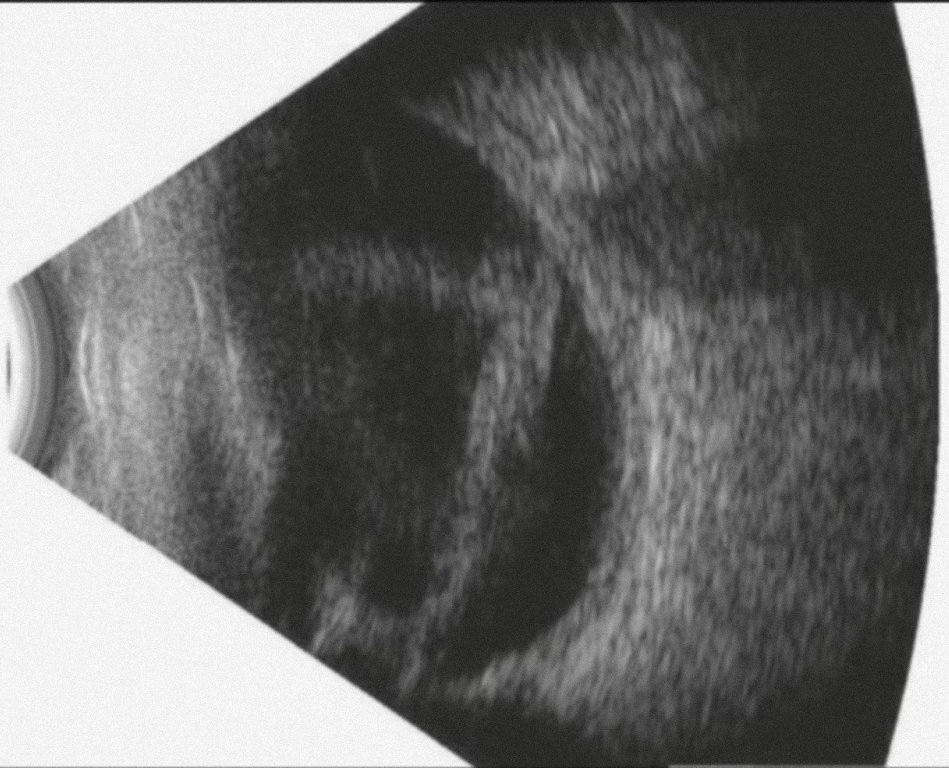
12A

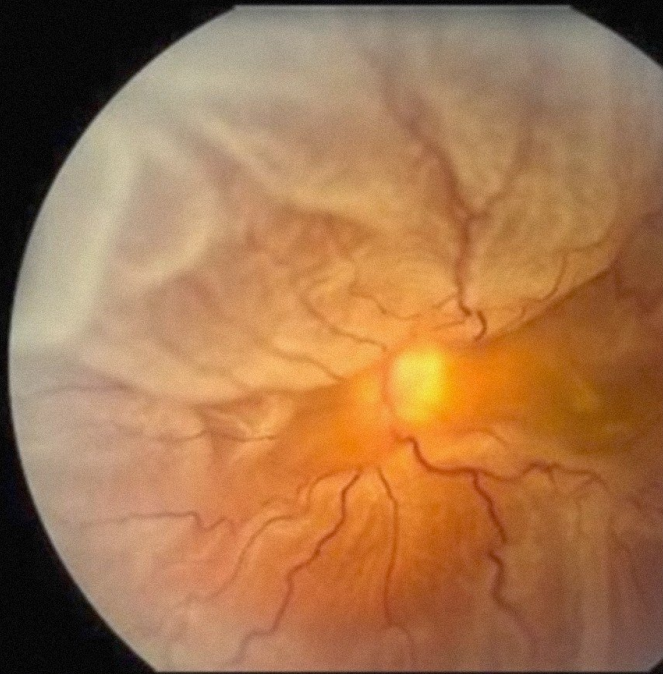


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OPEN FUNNEL v/s CLOSE FUNNEL RD





Complicated cataract
Uveitis
Phthisis Bulbi

