

Retinal Detachment

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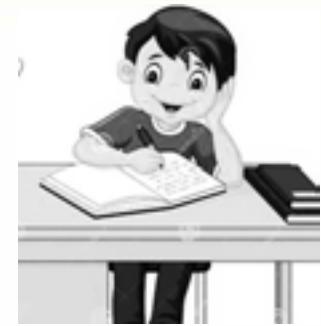


Retinal detachment (RD):

A separation of the neurosensory retina from the retinal pigment epithelium by subretinal fluid.

Posterior vitreous detachment (PVD):

A separation of the cortical vitreous from the internal limiting membrane (ILM) of the sensory retina posterior to the vitreous base.



Syneresis:

A contraction of gel which separates its liquid from solid components.

Synchysis:

A liquefaction of gel.



Rhegmatogenous retinal detachment

- ***full-thickness retinal break (RHEGMA)***
- ***liquefied vitreous gel***
- ***passage of liquefied vitreous via rhegma***



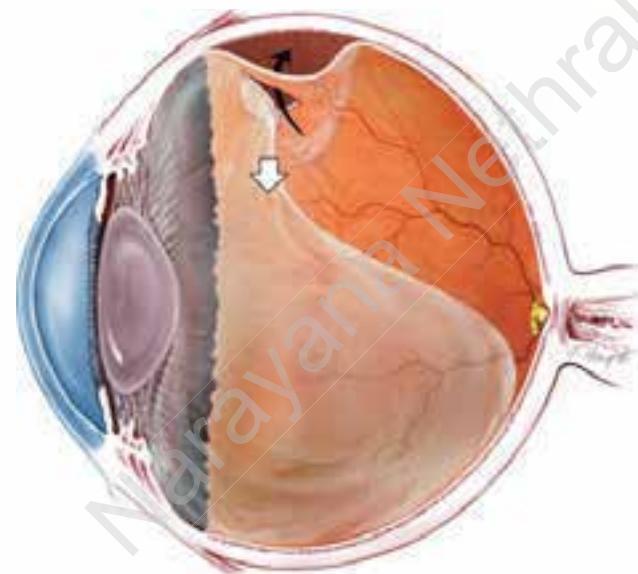
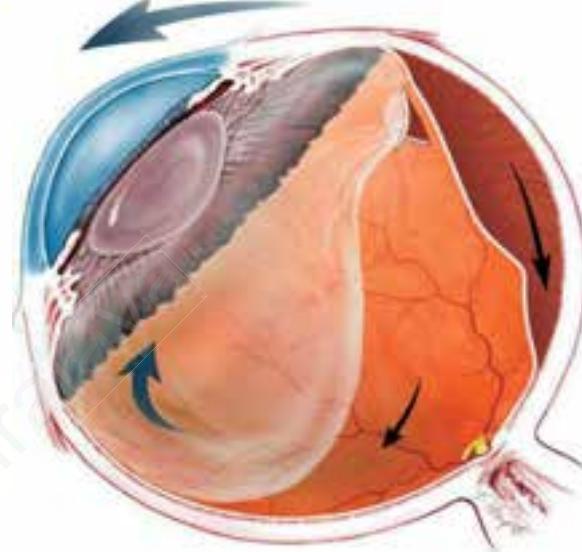
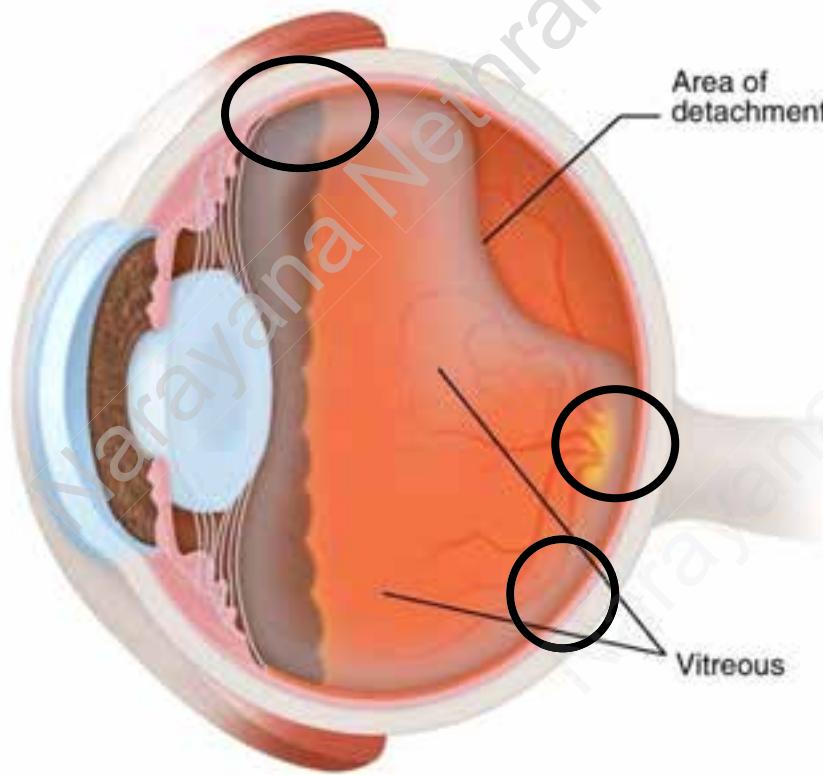
Traction retinal detachment

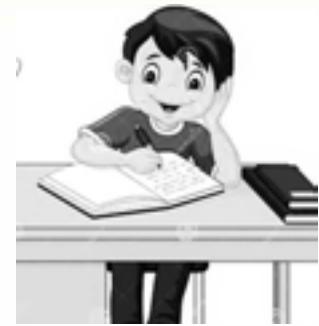
- **Vitreoretinal tractional force**
- **Mechanically pulls the retina away**



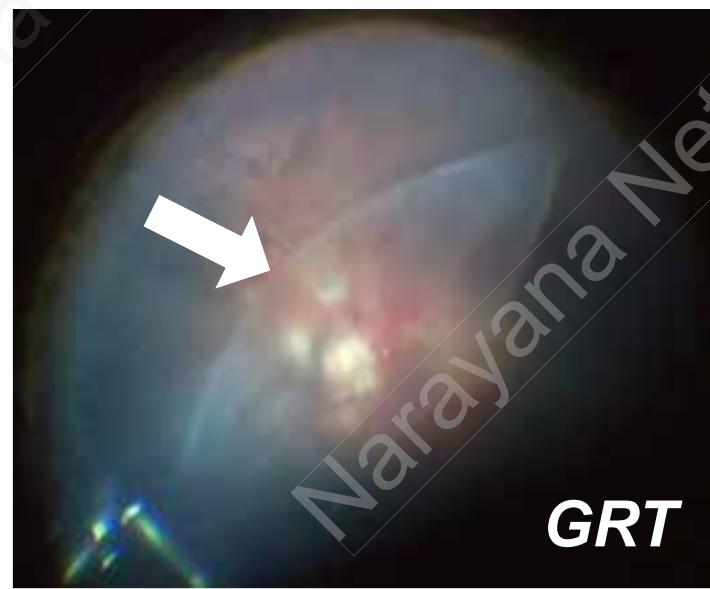
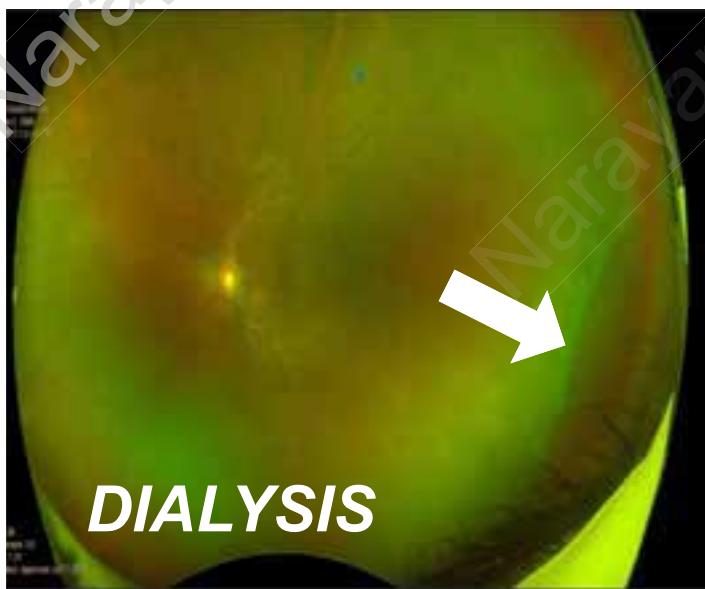
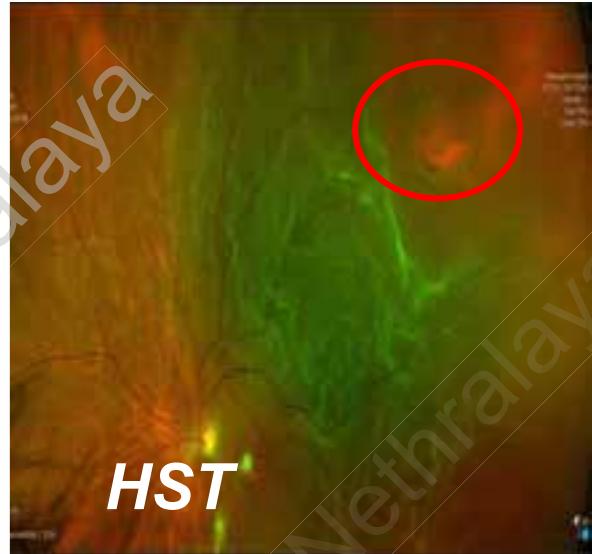
Exudative retinal detachment

- ***Collection of subretinal fluid secondary to diseases of the choroid and RPE***
- *Posterior scleritis, Malignant hypertension, Sympathetic ophthalmia, Toxemia of pregnancy, Neoplasms such as Malignant melanoma, choroidal hemangioma,*

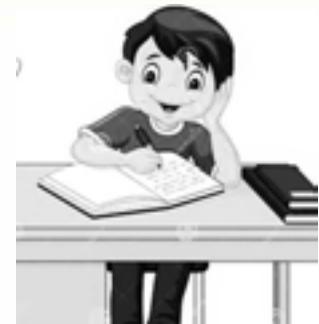




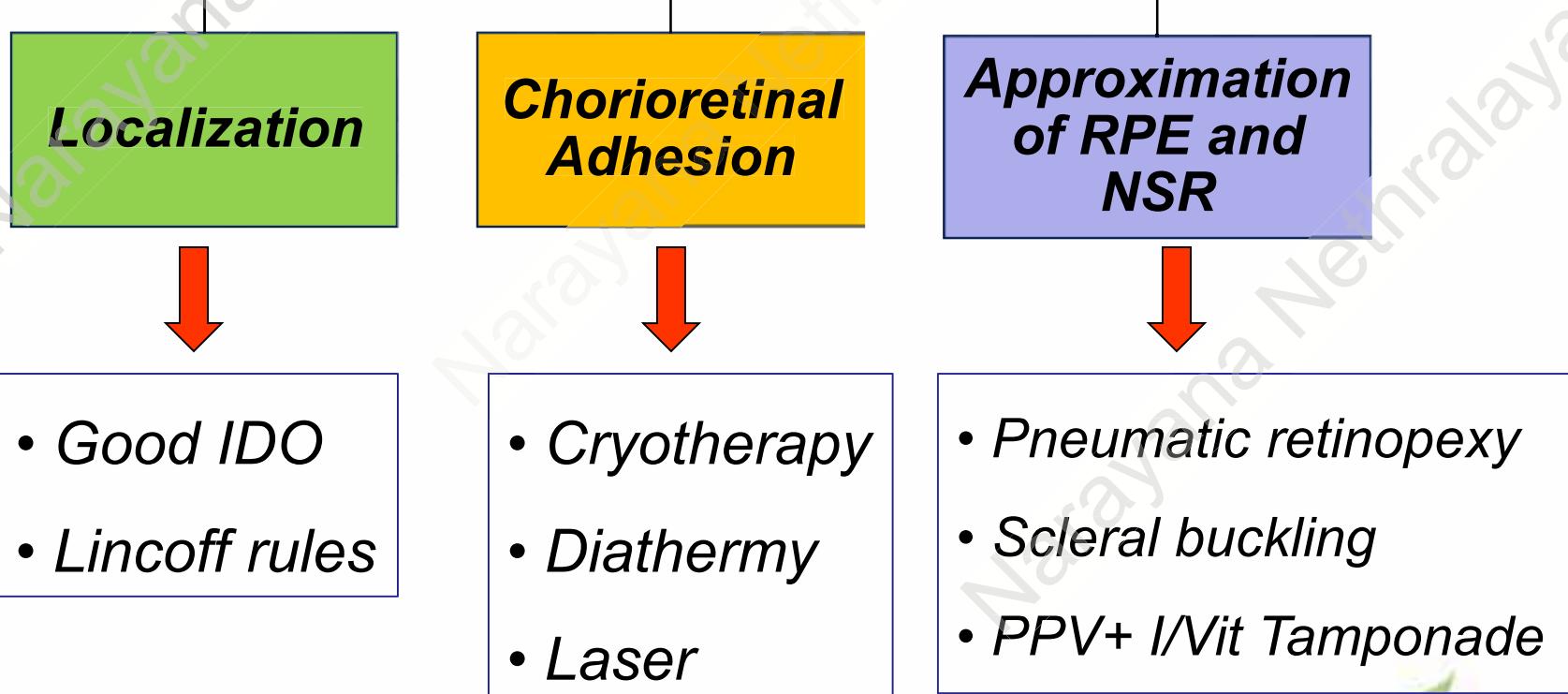
Predisposing peripheral retinal degenerations



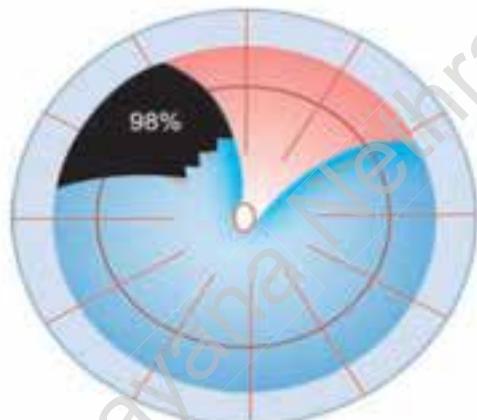
Management...



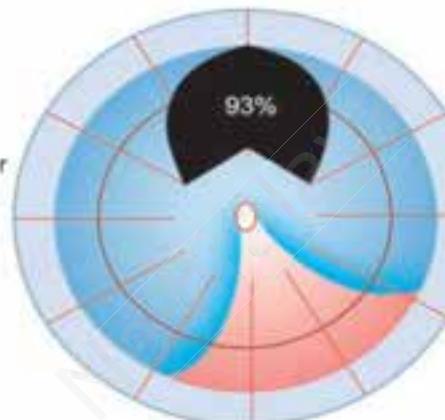
Principles of Management of RRD



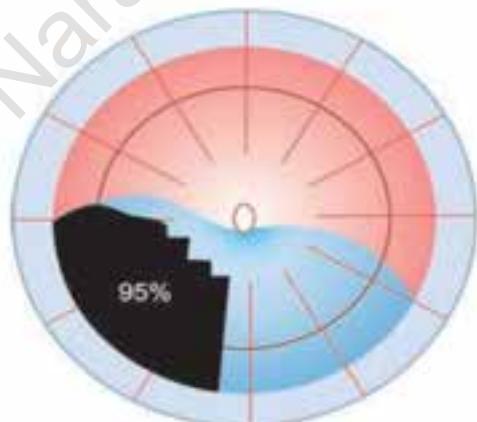
Localisation of break



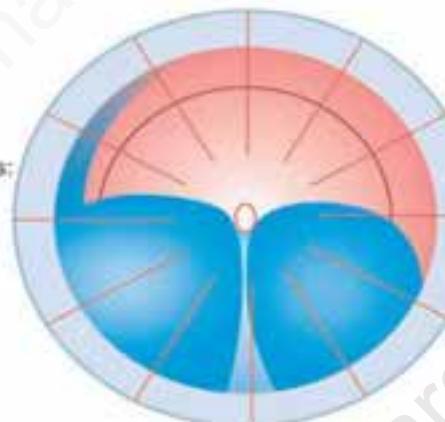
Rule 1:
Superior temporal or nasal detachments: in 98%, the primary break lies within 1½ clock hours of the highest border



Rule 2:
Total or superior detachments that cross the 12 o'clock meridian: In 93%, the primary break is at 12 o'clock or in a triangle, the apex of which is at the ora serrata, and the sides of which extend 1½ clock hours to either side of 12 o'clock



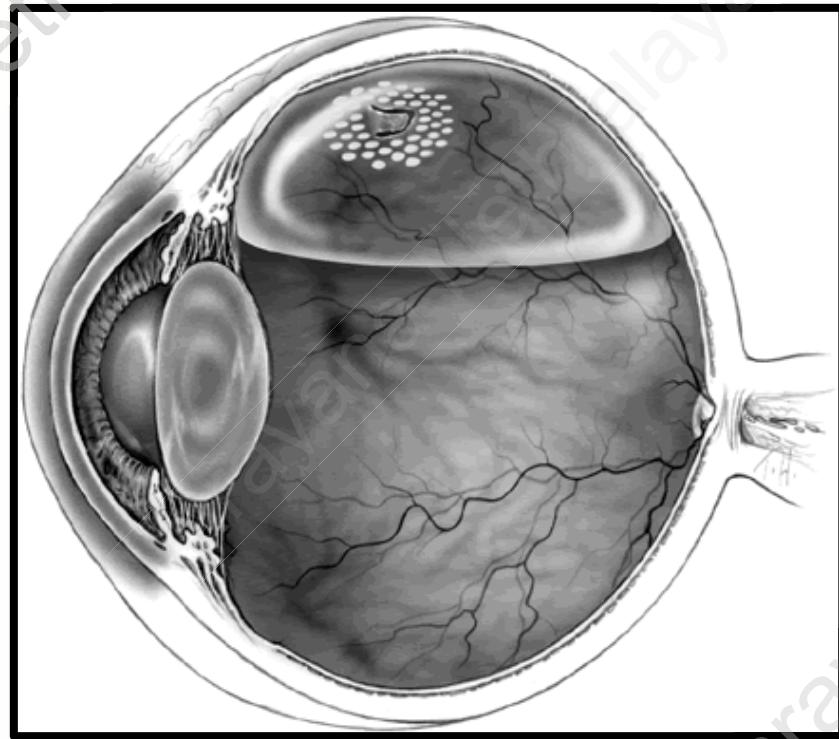
Rule 3:
Inferior detachments: in 95%, the higher side of the detachment indicates on which side of the disc an inferior break lies



Rule 4:
»Inferior« bullous detachment: Inferior bullae in a rhegmatogenous detachment originate from a superior break

Lincoff rules

Pneumatic retinopexy



Narayana Nethralaya

Narayana Nethralaya

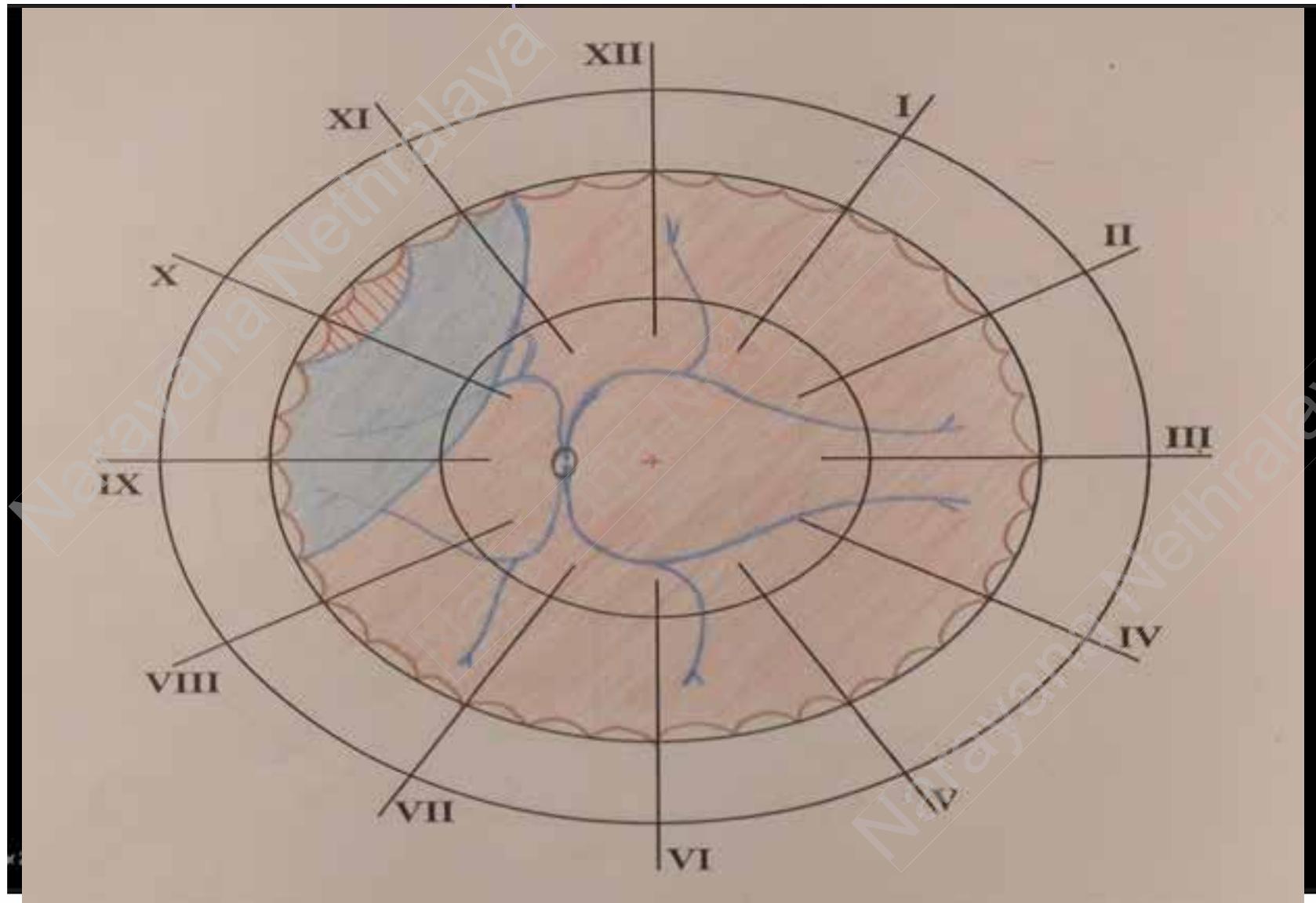
Narayana Nethralaya

14 y/M

Trauma to LE with tennis ball

BCVA : BE 6/6

Superonasal dialysis with shallow RD



Pneumatic Retinopexy with SF6



Post-op day 1

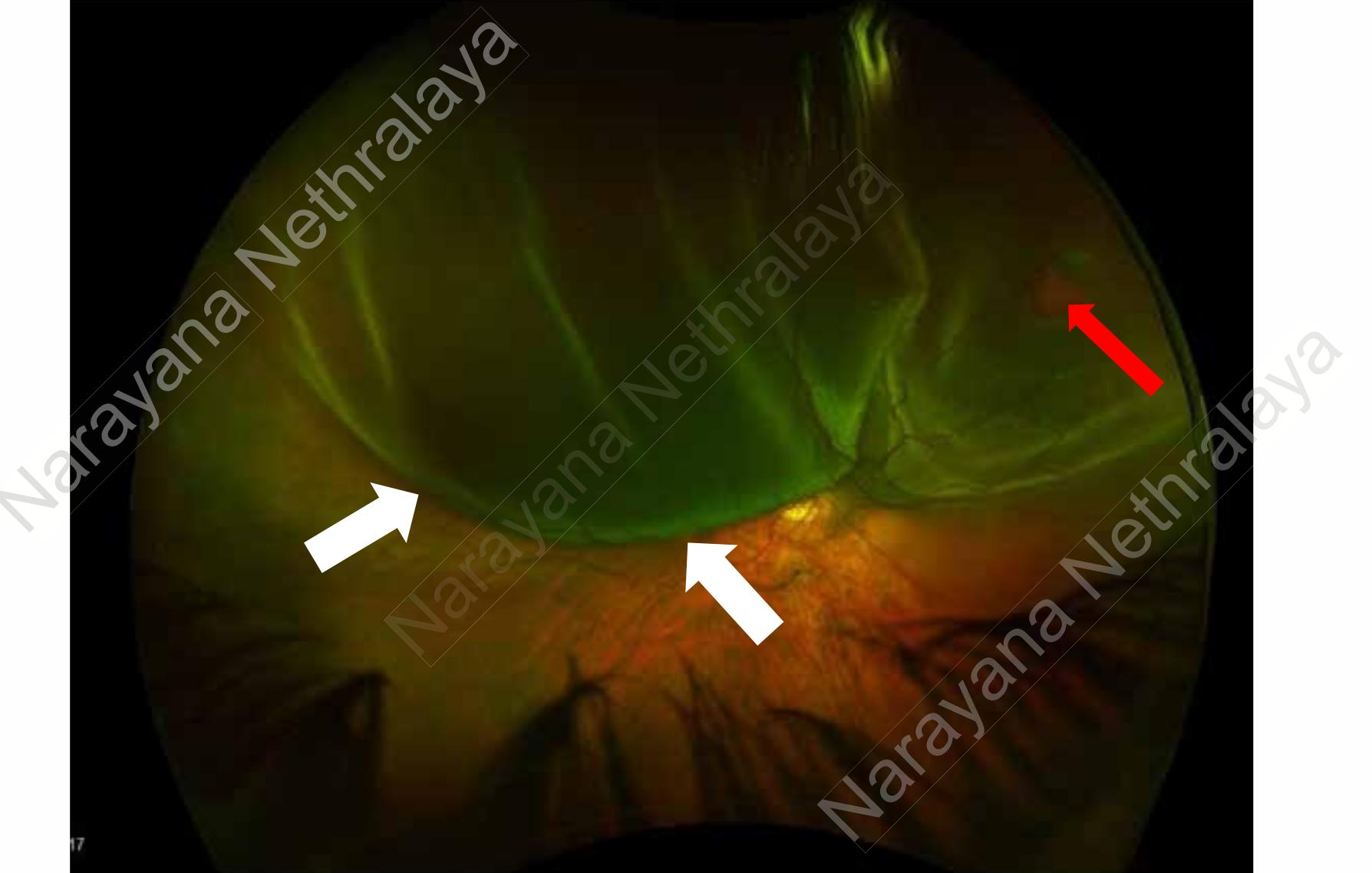
CASE - 2

38 y / F

CC : Sudden DOV RE

H/O LASIK BE 7yrs back

BCVA: RE-CF LE-6/9



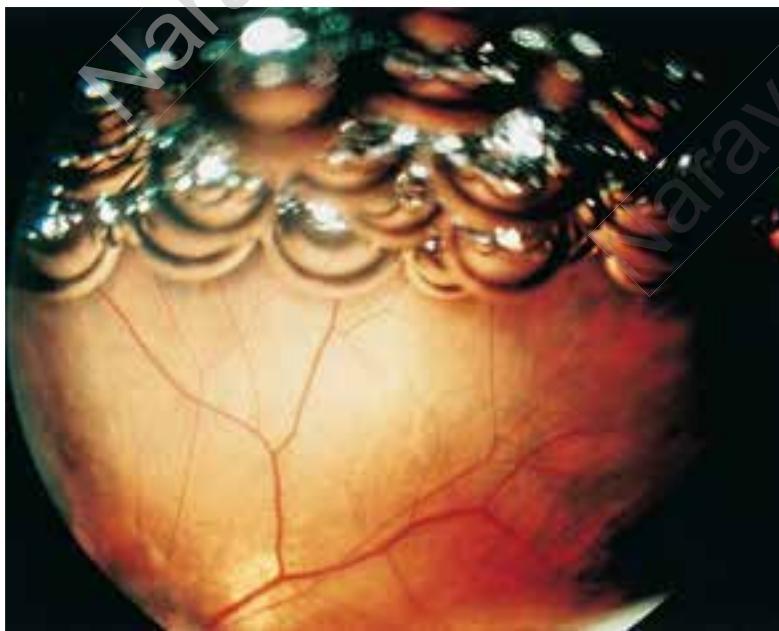
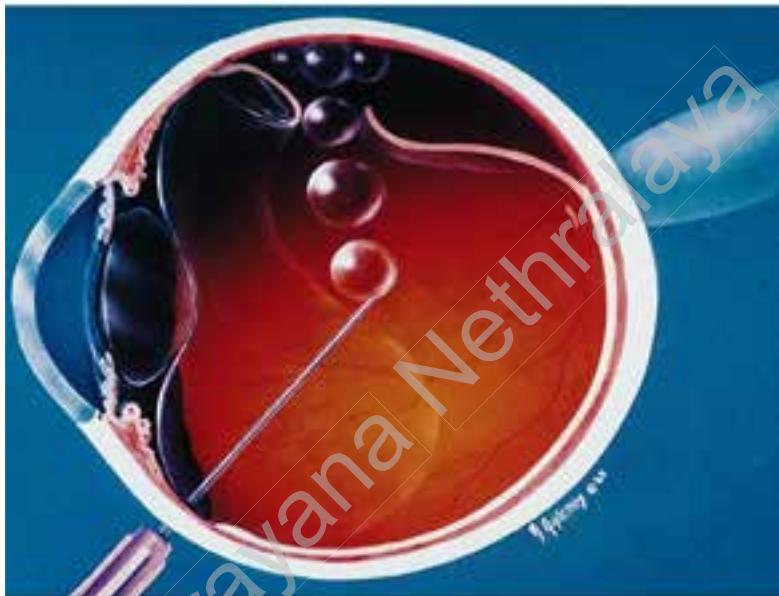
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Pneumatic Retinopexy with SF6 + Cryo

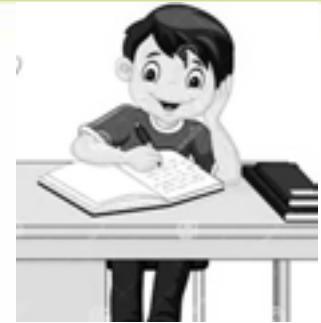


Post op day 1

BCVA at last F/U : RE 6/9



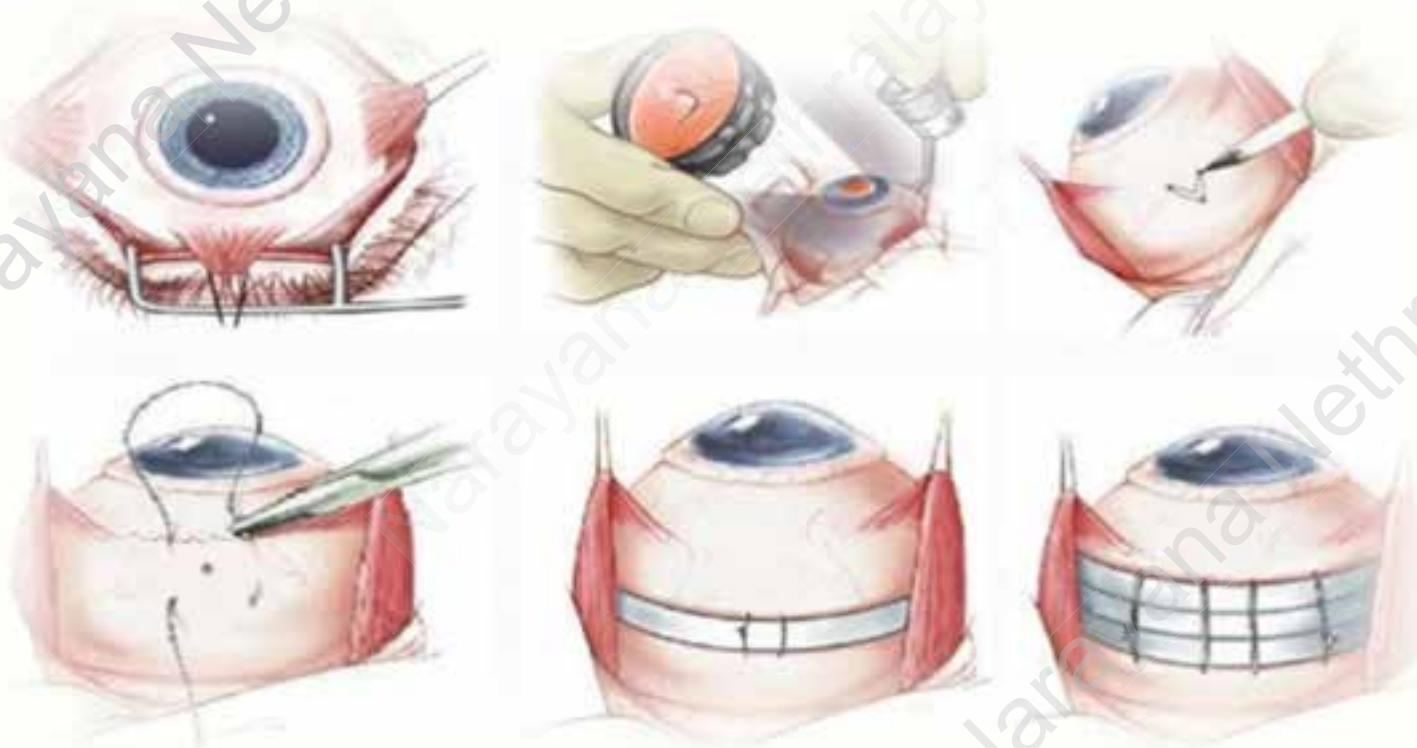
Fisheggs



Pneumatic retinopexy

Gas	Typical dose(ml)	Average duration (days)	Largest size by	Average expansion
Air	0.8	4	Immediate	No expansion
SF ₆	0.5	12	36hrs	Doubles
C ₃ F ₈	0.3	38	3days	Quadruples

Scleral Buckling

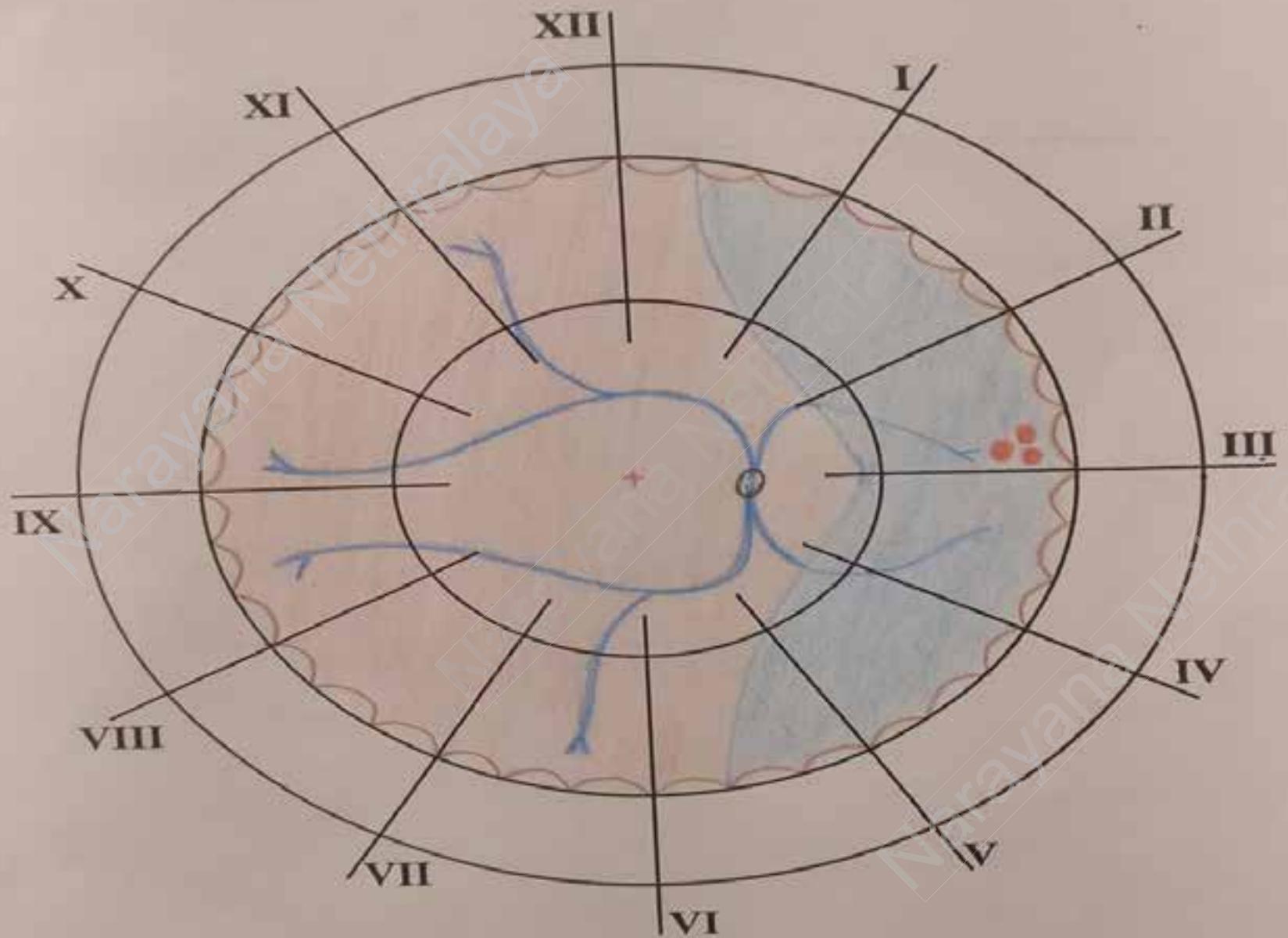


Chief complaint : DOV 3-4 days in RE

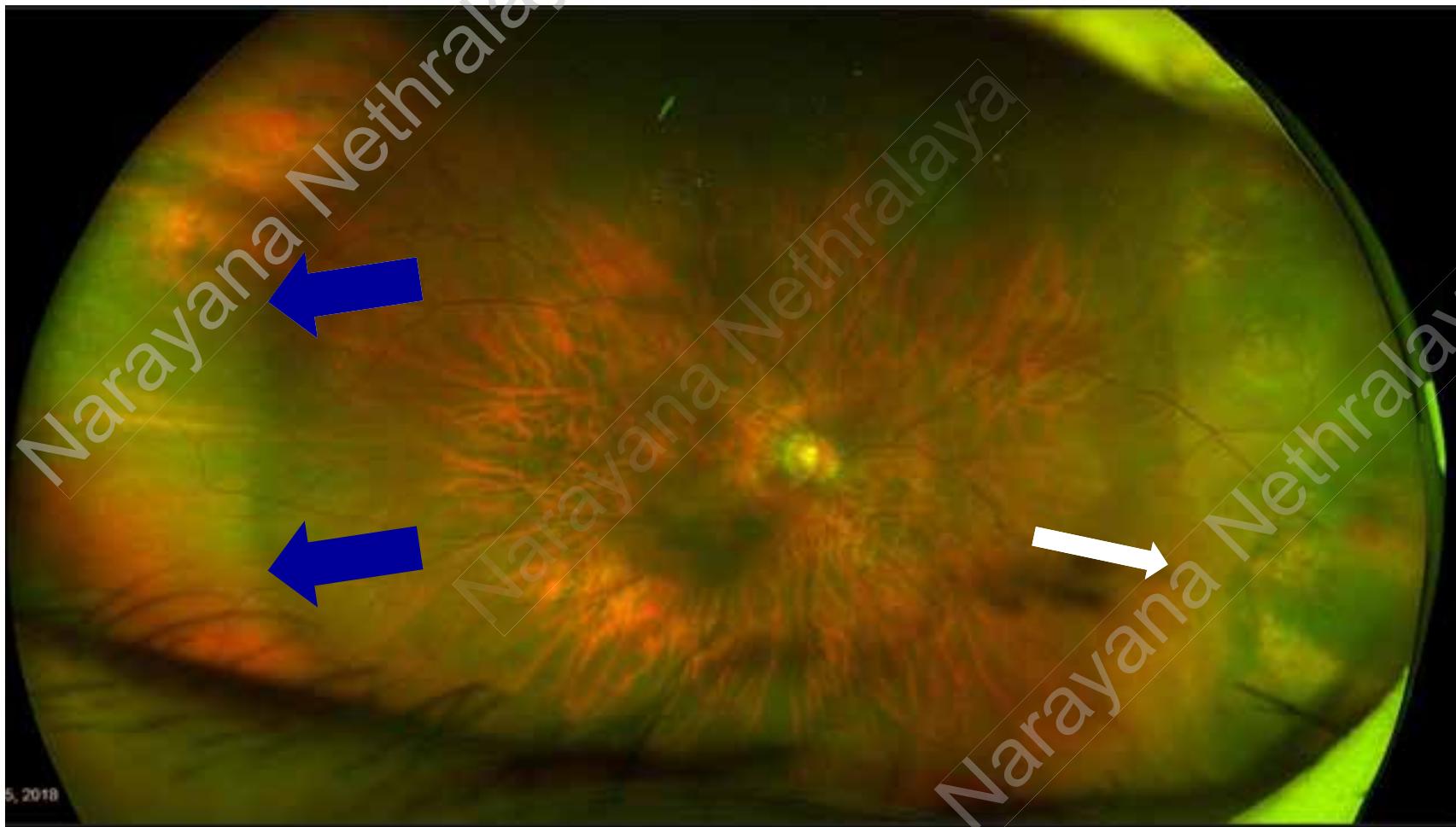
History : LASIK Sx done in RE, H/O RD Sx done in LE

Vn:6/9 (- 3 DS),HM + , OS:LE mat cat

RE : Nasal shallow RD with hole, macula on



Scleral Buckling +Cryopexy



BCVA : 6/9

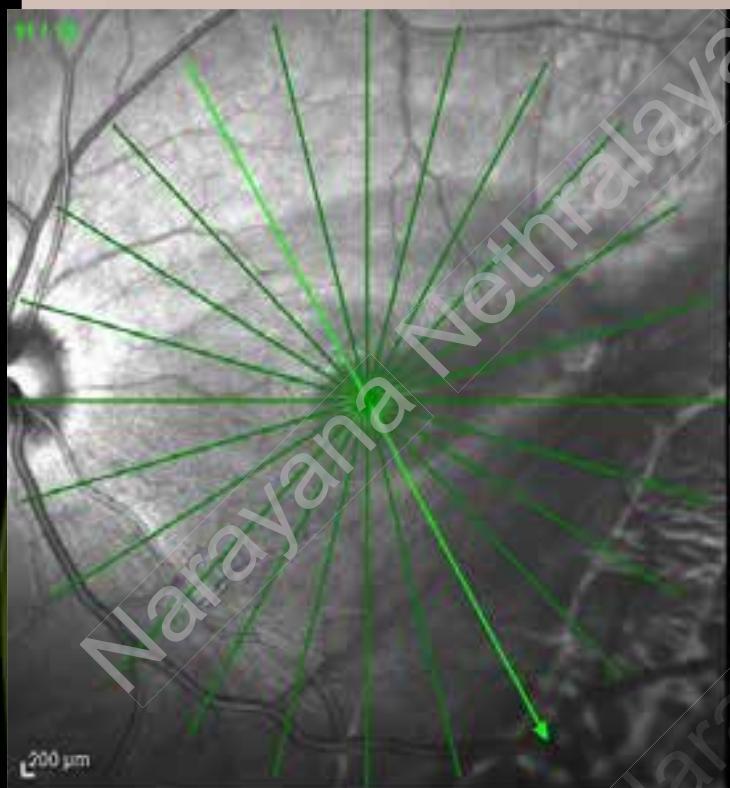
Chief complaint :

Distortion of images in LE -15 days

Vn: 6/6, 6/60

LE : Subtotal RD with macular split,
temporal lattice with holes

XII

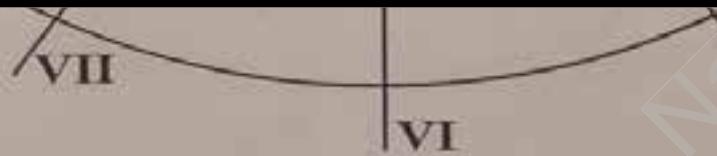


23-08-2018, OS

IR&OCT 30° ART [HS] ART(8) Q: 27



HEIDELBERG
ENGINEERING



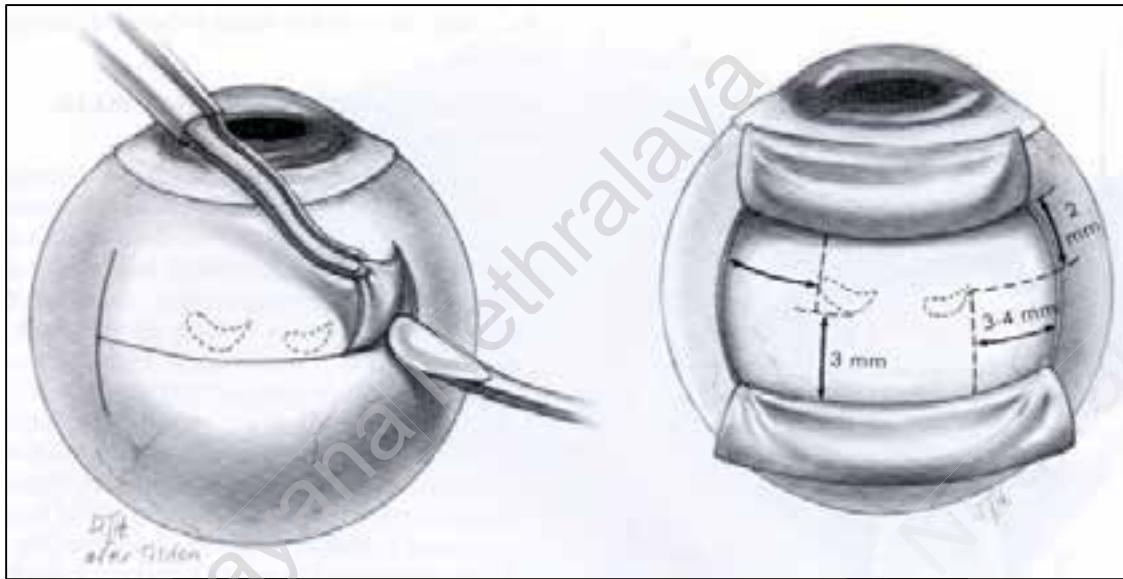
LE:S/P Scleral Buckle



BCVA : 6/9

IMPLANT

- Higher buckle effect
- Less extrusion
- Technically demanding
- Safer suture passage
- Diathermy can be done
- SRF drainage time reduced



Narayana Nethralaya

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Complications of SRF drainage

Intraoperative	Postoperative
Scleral perforation with suture needle	Infection & Extrusion
Draining SRF	Anterior segment Ischemia
	Strabismus
	Refractive Error

Complications while draining SRF –

Retinal incarceration

Vitreous incarceration

Choroidal hemorrhage





Infection and Extrusion

87 y / M

CC: Sudden DOV since 1 week LE

BCVA : LE – CF

LE - Subtotal RD, Macula off, HST STQ



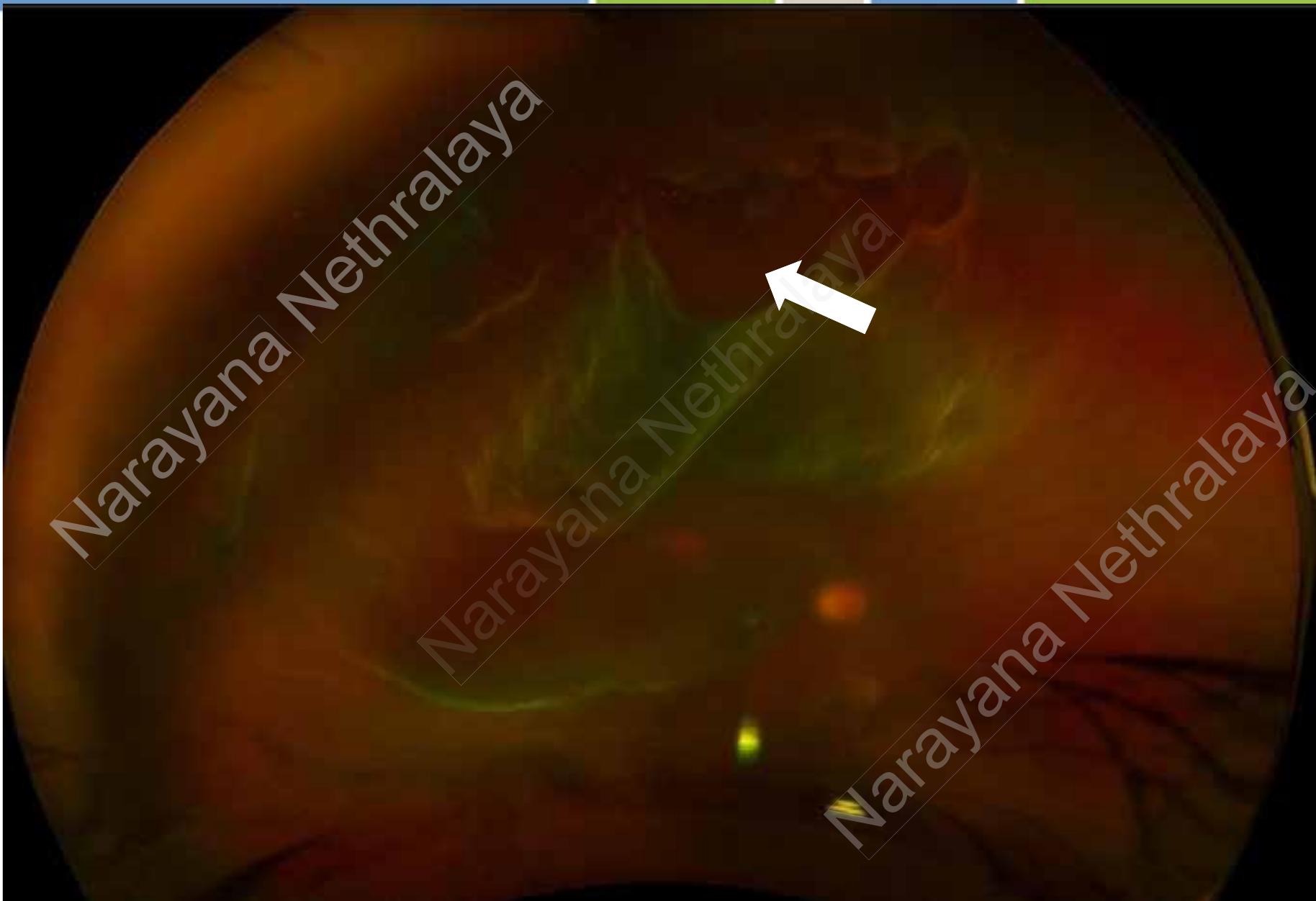
LE Vitrectomy + FGE + EL + SOI



BCVA on last FU :

LE 6/60

- **66 y / M**
- **CC : Sudden DOV in RE**
- **Myope**
- **BCVA - RE CF**
- **RE Subtotal RD, VH**



RE BB + Vit + FAE + EL + SOI



RE : SOR done 5 months later

BCVA on last F/U : 6/18

Narayana Nethralaya

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- **68 y / M**
- **DM since 16 yrs**
- **CC: DOV in LE**
- **BCVA : LE CF 1m**
- **LE taut PHF, Macular TRD**

NTHINATH mr
49
57.40 AM

HD

Narayana Nethralaya

Narayana Nethralaya



Narayana Nethralaya

LE Vit + MP + FGE + EL + SOI



BCVA on last F/U : 3/60

- **50 y / F**
- **DM**
- **CC: DOV BE**
- **BCVA : LE CF 1m**
- **LE Combined RD**



LE Vit + MP + FGE + EL + SOI



**BCVA on last F/U :
LE 6/36**

Narayana Nethralaya

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Narayana Nethralaya

To conclude

- ***Planned approach***
- ***Meticulous pre-operative evaluation***
- ***Brave & patient surgery***
- ***Good post-operative follow-ups***

RD can definitely be conquered



Thank You . .

Grade	Features
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 ^a
CA 1-12	Anterior to equator, focal, diffuse, or circumferential full-thickness folds, subretinal strands ^a , anterior displacement ^b , condensed vitreous strands ^c

Type	Location (in Relation to Equator)	Features
Focal	Posterior	Star fold posterior to vitreous base
Diffuse	Posterior	Confluent star folds posterior to vitreous base; optic disc may not be visible
Subretinal	Posterior/ anterior	Proliferation under the retina; annular strand near disc; linear strands; moth-eaten-appearing sheets
Circumferential	Anterior	Contraction along posterior edge of vitreous base with central displacement of the retina; peripheral retina stretched; posterior retina in radial folds
Anterior	Anterior	Vitreous base pulled anteriorly by proliferative tissue; peripheral retinal trough; displacement ciliary processes may be stretched, may be covered by membrane; iris may be retracted

Upgraded PVR Grade Classification 1991