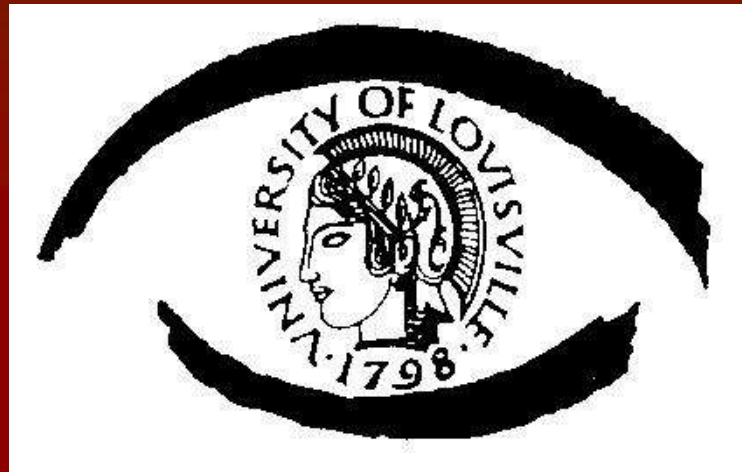


Grand Rounds



Denis Jusufbegovic, M.D.

University of Louisville

Department of Ophthalmology and Visual Sciences

10/01/10

Subjective

CC: “ blurry vision in L eye for one month”

HPI: 34 year-old WM presented c/o blurry vision OS x 1 month. Onset was gradual. Pt. thought blurry vision was due to a poorly fitted contact lens. No photopsia or floaters. No recent ocular or head trauma. He was seen by an outside physician and referred to a retina specialist for further evaluation.

POH: RE

PMH: None

MEDS: None

All: NKDA

ROS: Negative

Objective

BCVA $\left\{ \begin{array}{l} 20/20 \\ \text{CF at 2 ft} \end{array} \right.$

P $\left\{ \begin{array}{l} 3 \rightarrow 2 \text{ brisk OU} \\ 3 \rightarrow 2 \text{ } \emptyset \text{ RAPD} \end{array} \right.$

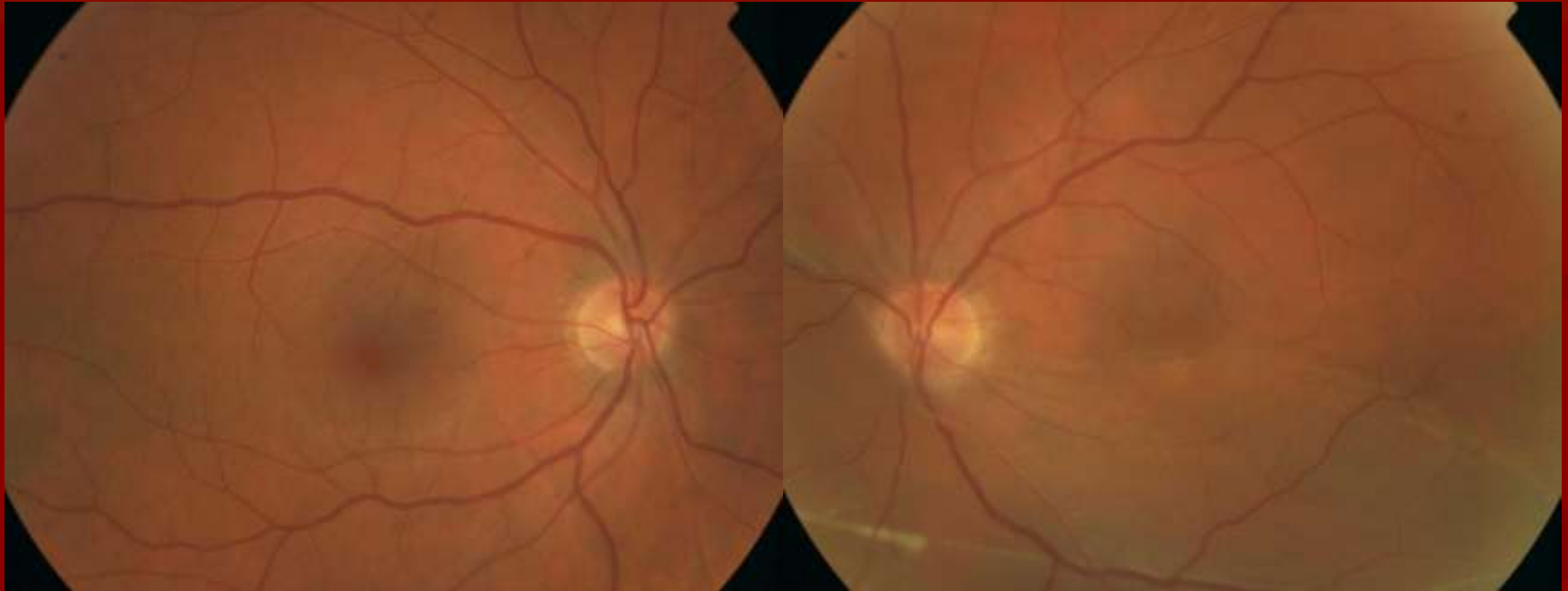
T $\left\{ \begin{array}{l} 14 \\ 14 \end{array} \right.$

EOM: Full OU

Anterior Segment Exam: unremarkable

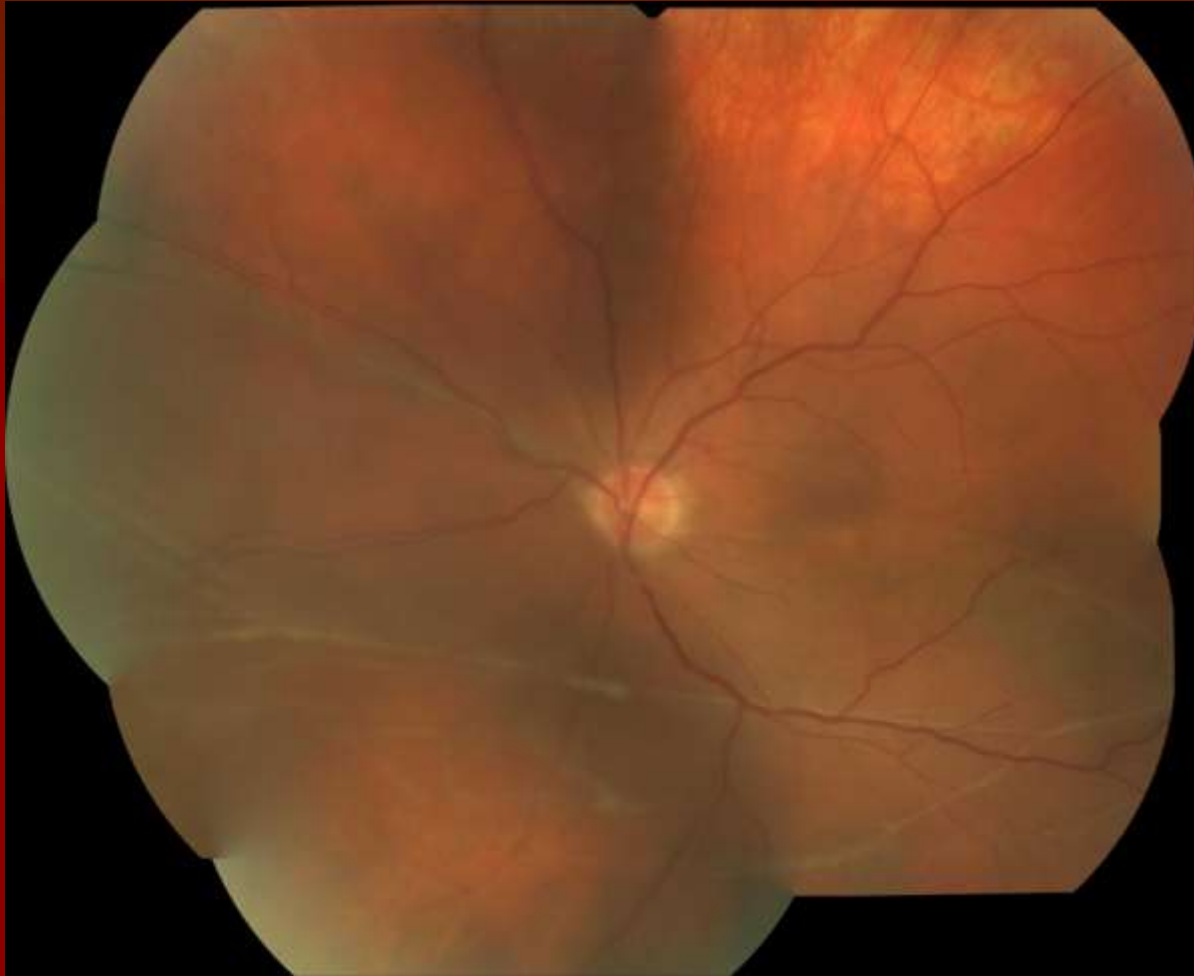
DFE: WNL OD; retinal detachment OS

Fundus Photos



Color fundus photos demonstrate normal fundus OD and large inferior retinal detachment involving macula OS

Fundus Photo OS

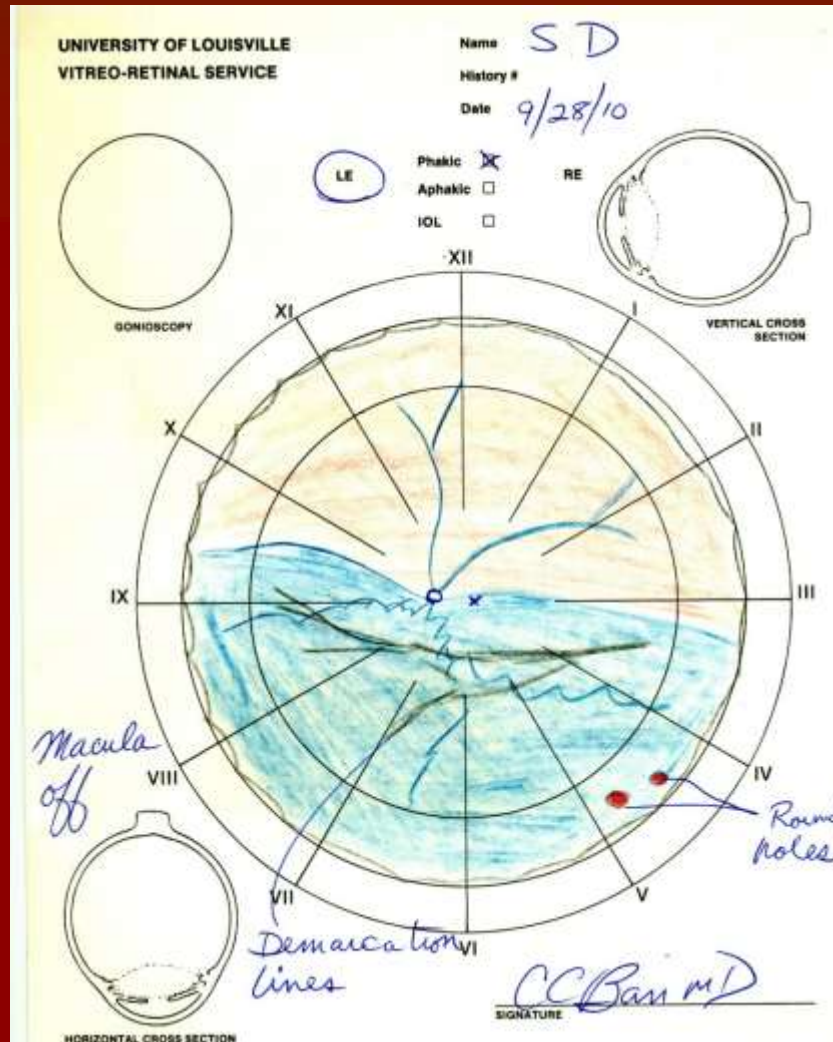


Mosaic fundus photo OS demonstrates large inferior rhegmatogenous retinal detachment, multiple demarcation lines and macula-off.



Demarcation lines OS

Retinal Drawing OS



Assessment

34 year-old WM with chronic rhegmatogenous RD OS
and multiple demarcation lines.

Etiology?

Traumatic tear

Traumatic dialysis

Lattice degeneration

Idiopathic retinal holes

Plan

- Patient underwent successful scleral buckling surgery with the placement of scleral sponge to the inferior 180°.
- Retina reattached first post – op day, VA = 20/400



Post-op color fundus photo showing reattached retina OS

Discussion

Retinal Detachment

- Rhegmatogenous
- Tractional
- Exudative

Pathophysiology

- Rhegmatogenous: full thickness retinal tear → break held open by vitreoretinal traction → liquefied vitreous accumulates under retina separating it from RPE
- Tractional: retinal pulled by tractional forces in the absence of tears
- Exudative: fluid accumulation in the subretinal space in the absence of retinal breaks or traction.

Etiology of RD

Rhegmatogenous

- Myopia
- Lattice degeneration
- Horseshoe tears
- Round retinal holes
- Retinal dialysis
- Pseudoaphakia
- Traumatic dialysis
- Toxoplasmosis
- CMV infection
- Acute retinal necrosis syndrome

Tractional

- Diabetic retinopathy
- Sickle cell retinopathy
- Retinopathy of prematurity
- Proliferative vitrioretinopathy
- Following penetrating ocular trauma

Exudative

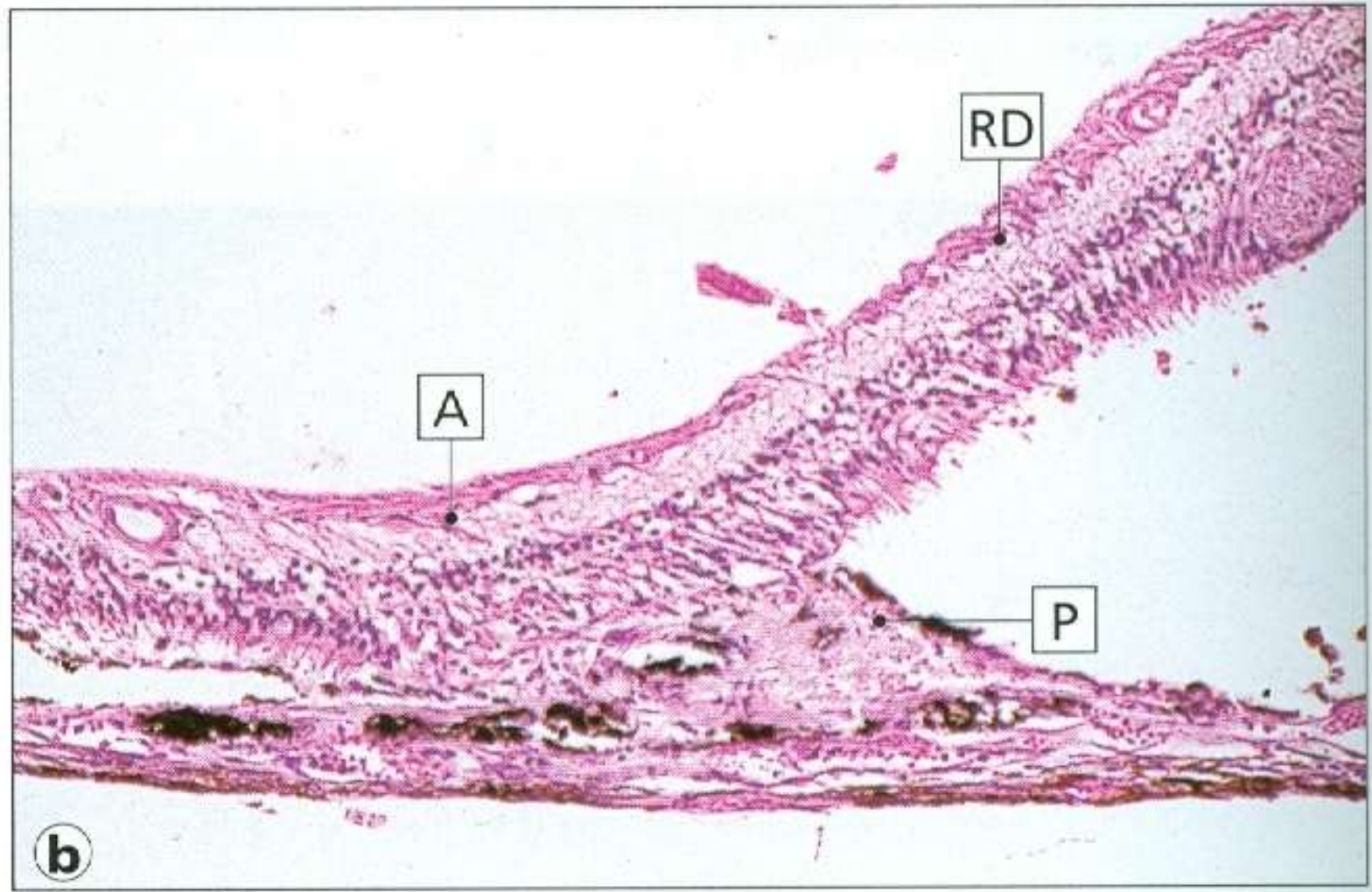
- Choroidal tumors: nevi, melanoma, hemangioma, lymphoma, metastasis
- Inflammation: sympathetic ophthalmia, Harada disease, pars planitis, collagen vascular diseases, posterior scleritis
- Vascular diseases: retinal vein occlusion, malignant HTN, Coats disease, eclampsia, retinal angiomatous disease, polypoidal choroidal vasculopathy
- Others: central serous chorioretinopathy, familial exudative vitrioretinopathy, Norrie disease, uveal effusion syndrome, nonophthalmia, optic nerve pits, colobomas

Demarcation Line

- Proliferation and metaplasia of RPE at the junction of attached and detached retina
- Proliferated RPE lays down basement membrane (BM)
- BM material appears clear or white, but RPE cells may accentuate the line by giving it a brown color
- Usually signifies a slow progression of detachment

Demarcation Line

- Presence indicates neural retinal detachment of at least 3 month duration
- Forms due to RPE detachment from Bruch's membrane and pre and subretinal proliferation
- More common in younger patients
- Demarcation lines don't prevent the progression of RD and treatment is required in most cases



Histopathologic appearance of demarcation line showing the proliferation of RPE and increased the thickness of BM

Treatment

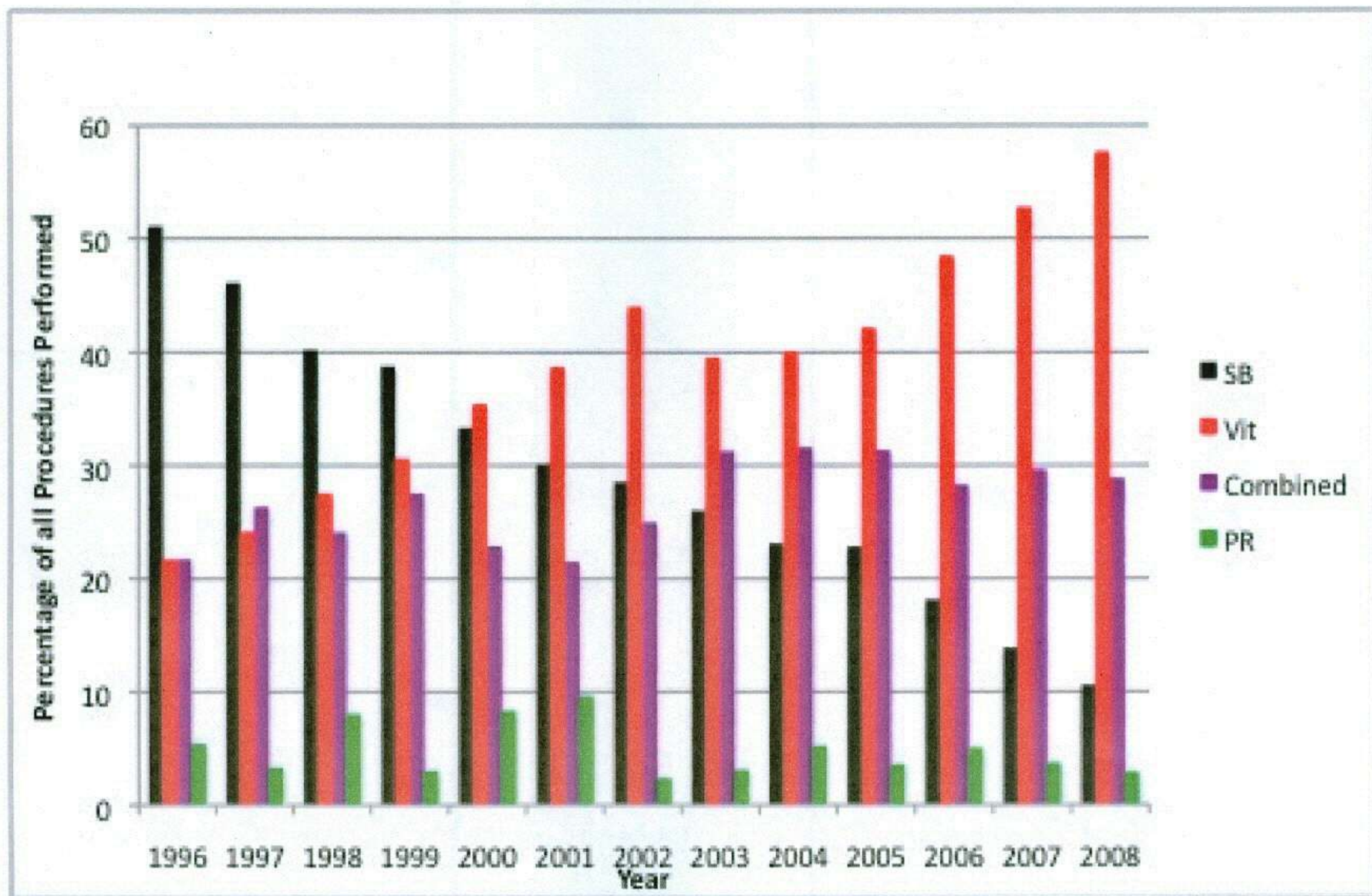
- Scleral buckling
- Vitrectomy
- Pneumatic Retinopexy

Treatment

- Paucity of randomized trials comparing different procedures
- Most randomized trials showed no superiority of any procedure
- No formal guidelines for selecting the optimal surgical procedure

- Scleral buckling: best option for young, phakic patients
- Vitrectomy: excellent option for pseudophakic eyes
- Pneumatic retinopexy: excellent option for primary detachments with small breaks restricted to the superior 2/3 of the fundus

Figure 1



References

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Thank You