

# Ophthalmology SAQ

## By: 430 Ophthalmology team

### Ocular Manifestations of Systemic Diseases

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❖ **Note: please refer to the original lecture given by the doctor**



The pictures were sorted by:

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- Lamis Atyah Al-Malki

# Disclaimer!

The information in these slides are all from the original pictures/past exams/lectures, I haven't changed any of it and kept each diagnosis as it is.

My aim was just to make it organized and comprehensible

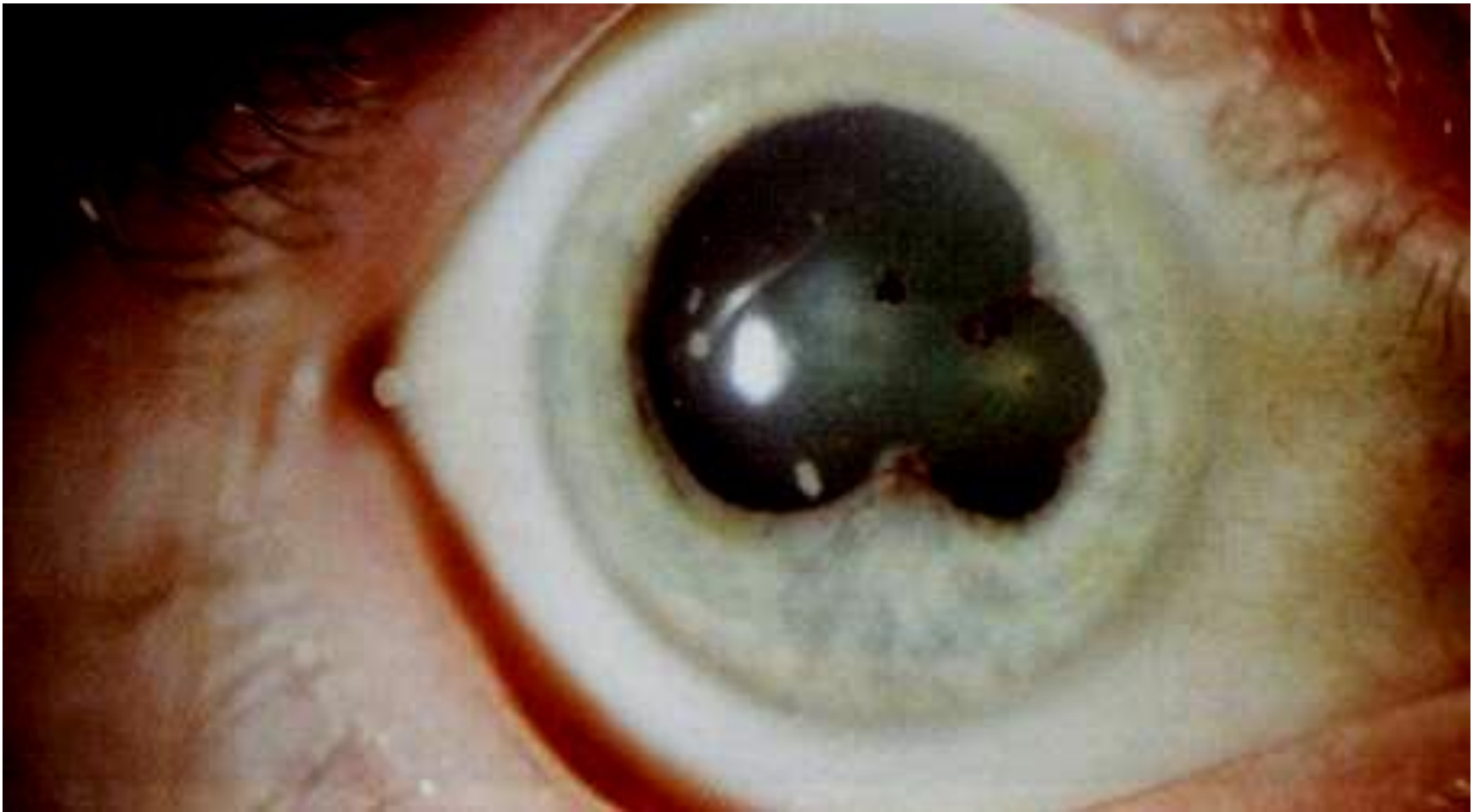
The arrows on the pictures and notes in the boxes similar to this one are my personal attempts at interpreting the images so keep in mind the possibility of them being wrong

# Posterior Synechia (Irregular Pupil)

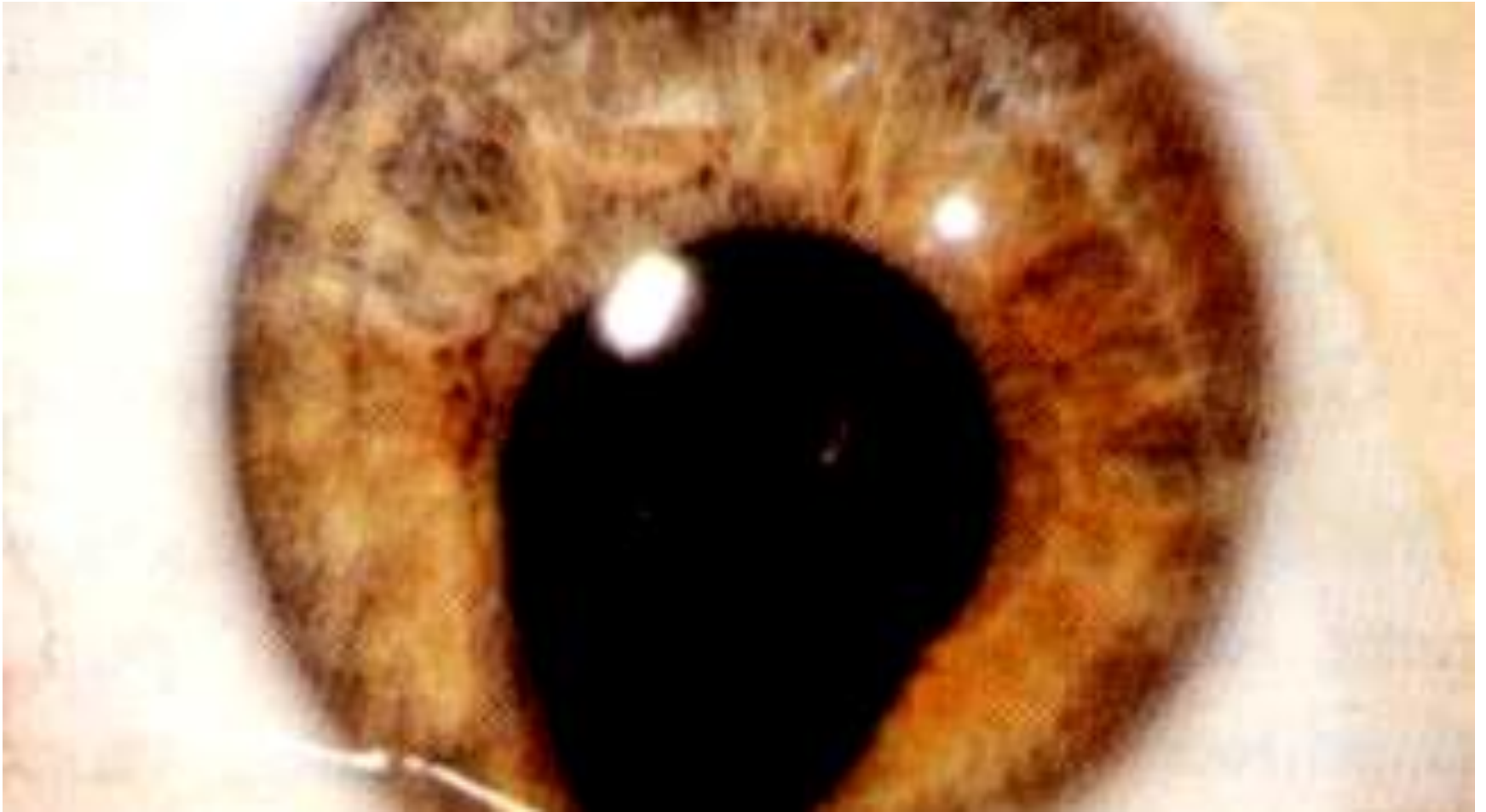
- Patient with skin , hearing, eye problems.
- What is your finding?
  - Posterior synechia.
- What is your Diagnosis?
  - VKH



# Posterior Synechia (Irregular Pupil)



# Inferionasal coloboma of iris.



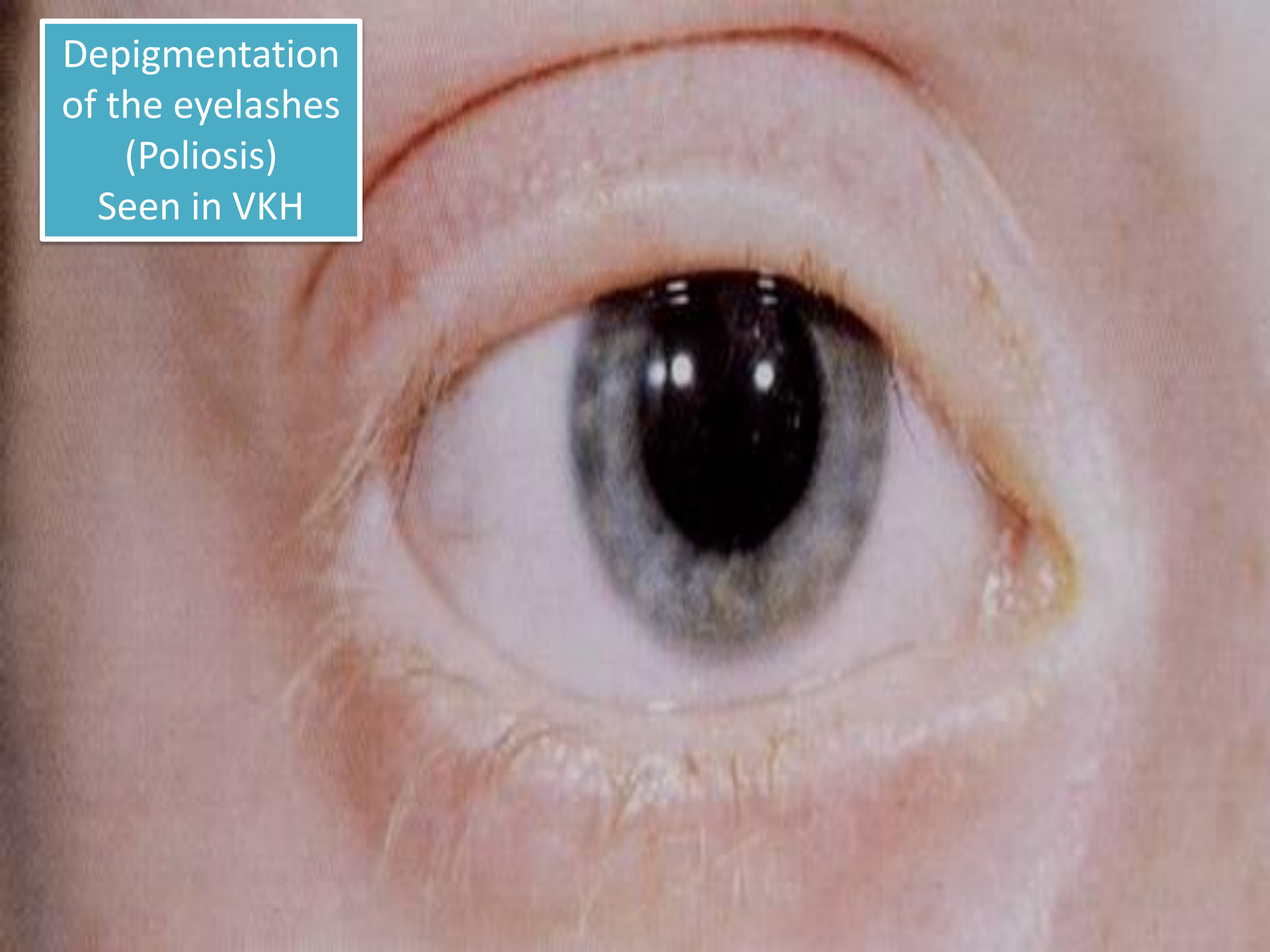
# Poliosis

- 25 y.o. female with depigmentation of the eye lashes, eye brow (poliosis) , vitiligo & Hearing loss
- What is your diagnosis?
  - V.K.H. disease
  - She will also have : Uveitis & Exudative Retinal detachment.



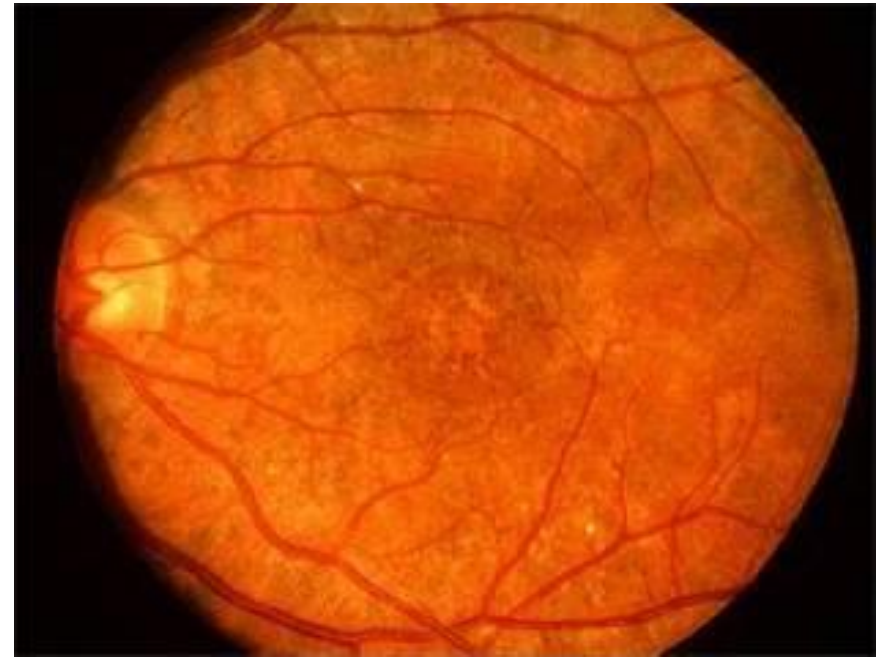


Depigmentation  
of the eyelashes  
(Poliosis)  
Seen in VKH



# Pigmentary Retinopathy

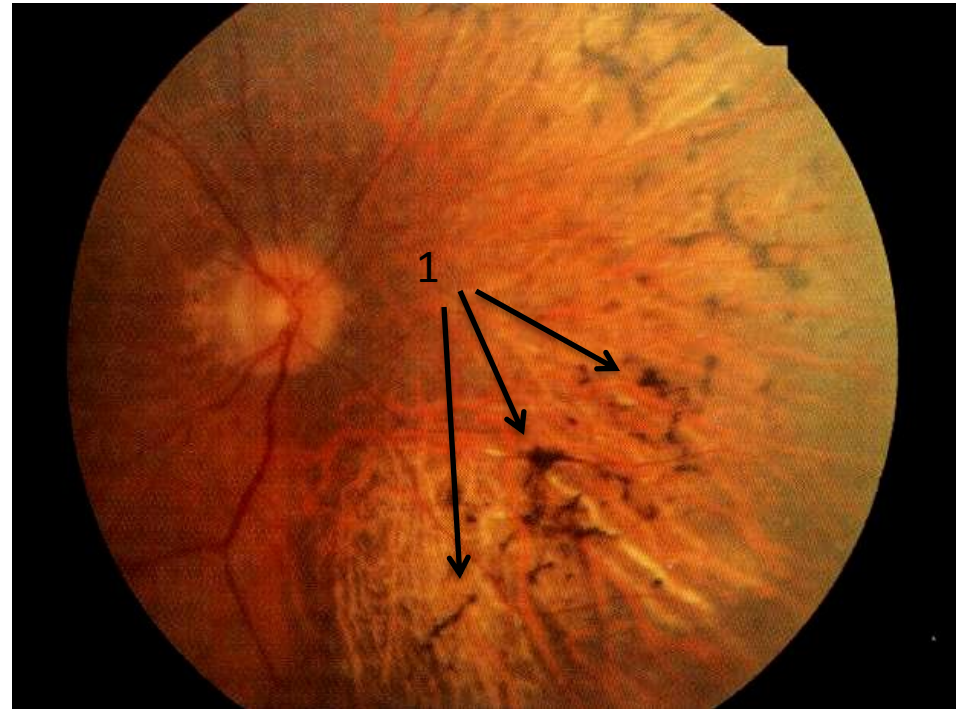
- Diagnosis?
  - Pigmentary retinopathy.
  - Don't write ( retinitis pigmentosa) because this is a hereditary disease.
- This is a side effect of?
  - Thioridazine (From our Toxicology Lecture and Medscape)





# Retinitis Pigmentosa

- This patient presented with night blindness
- What does this patient have?
  - Retinitis Pigmentosa.



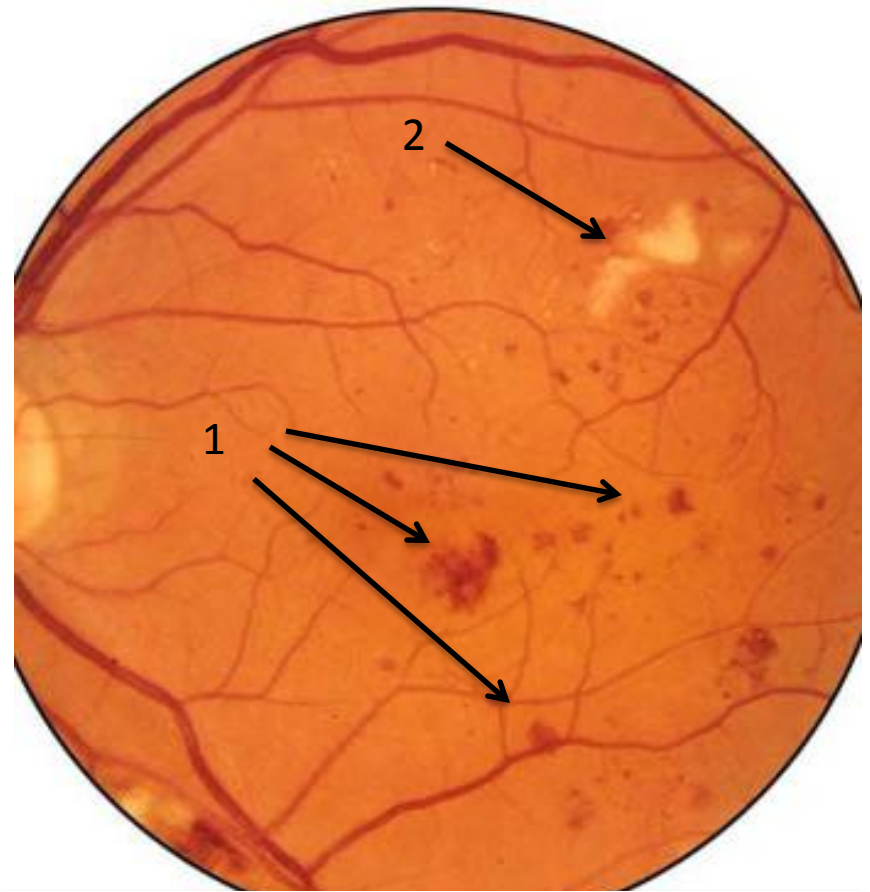
1- Retinal Pigmentation

# Retinitis Pigmentosa



# Non-proliferative Diabetic Retinopathy

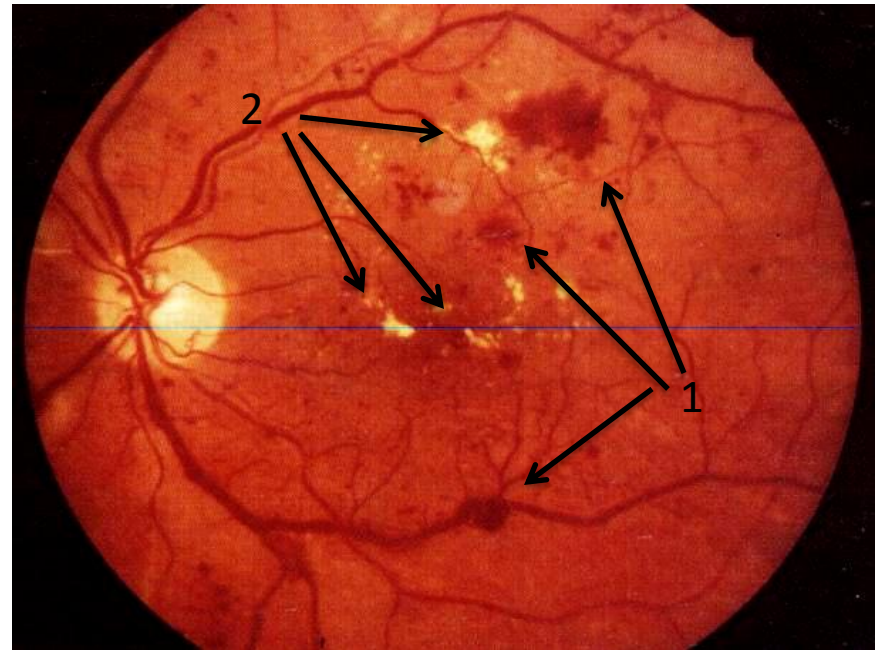
- Diagnosis?
  - Non proliferative DRP
- Treatment?
  - Focal or Grid photocoagulation



1- Dot blot hemorrhage  
2- Cotton Wool Spots

# Non-proliferative Diabetic Retinopathy

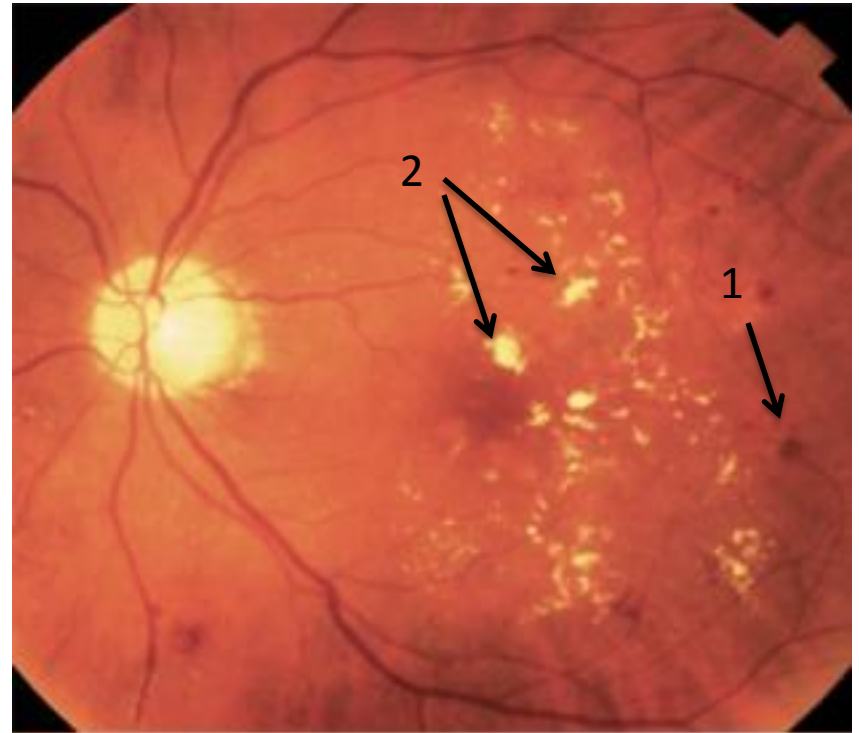
- What is your diagnosis?
  - Non-proliferative Diabetic retinopathy.
- How is this condition treated?
  - Focal Laser for macular edema.



1- Dot blot hemorrhage  
2- Hard Exudates

# Non-proliferative Diabetic Retinopathy

- What is the diagnosis?
  - Non-proliferative Diabetic Retinopathy
- Management?
  - Focal Laser and blood sugar control



1- Dot blot hemorrhage  
2- Hard Exudates



# Non-proliferative Diabetic Retinopathy

- Diagnosis?
  - Non-proliferative diabetic retinopathy in the left eye
- Treatment?
  - Focal or grid photocoagulation





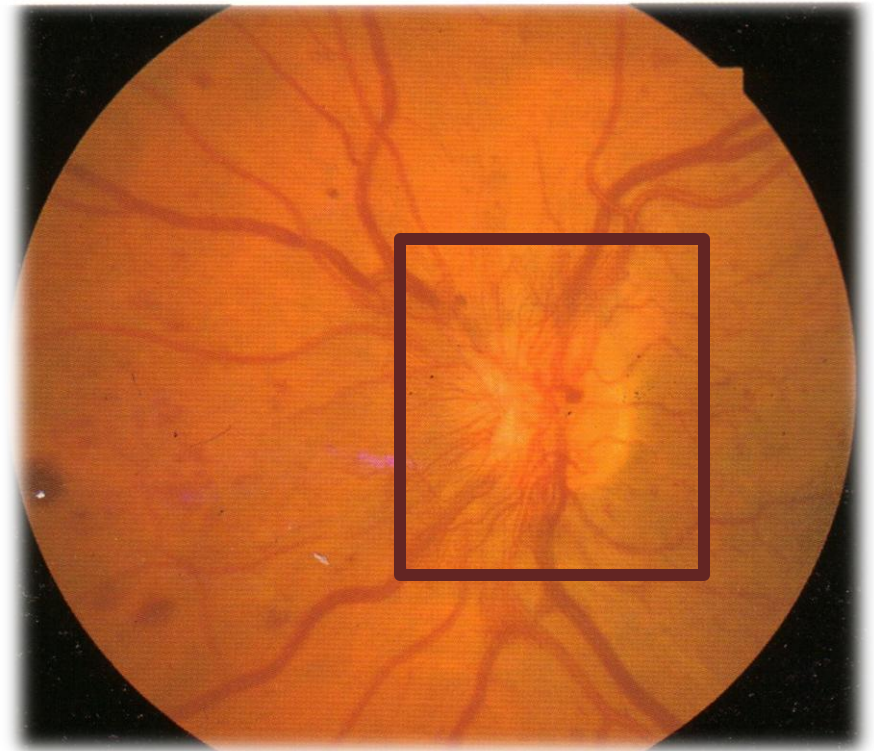
# Not Edited!

- Non-Proliferative Diabetic Retinopathy (No New vascular Formation)
- Tx: Focal Laser (Not Sure?)
- Hard Exudate.
- Congested Veins.
- Hemorrhages



# Proliferative Diabetic Retinopathy

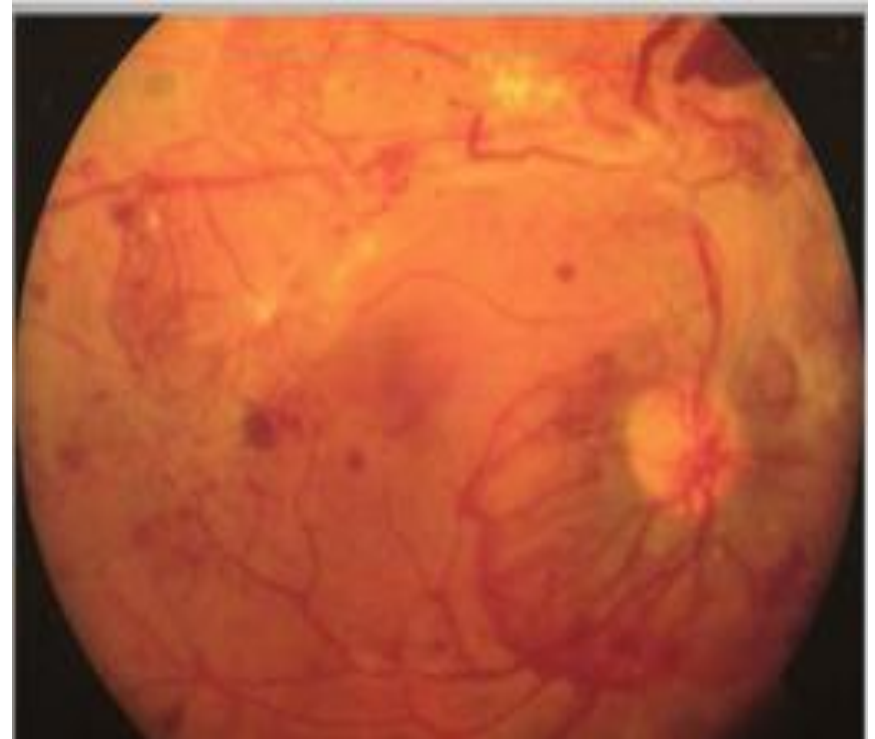
- This is the eye of a 56 year old Diabetic man
- What is the diagnosis and Sign?
  - Proliferative diabetic retinopathy (PDR).
  - ( Fan sign ) → Optic head nerve neovascularization
- How would you manage this patient?
  - Pan-retinal photocoagulation (PRP) and control blood sugar.



The optic head looks like a fan = Neovascularization

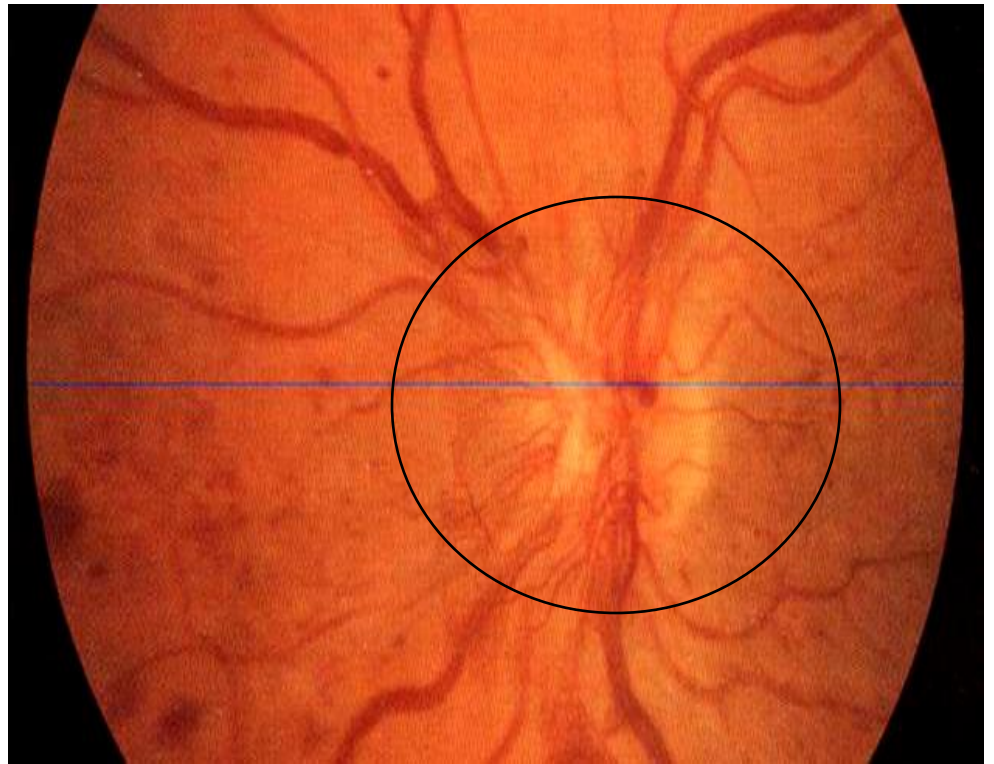
# Proliferative Diabetic Retinopathy

- Diabetic Patient, What is your diagnosis?
  - Proliferative Diabetic Retinopathy
- How would you manage this patient?
  - Control his BP and do PRP



# Proliferative Diabetic Retinopathy.

- Fan-shaped New Vascular Formation Around the Disc
- Treatment:
  - P.R.P. (Pan Retinal Photocoagulation).

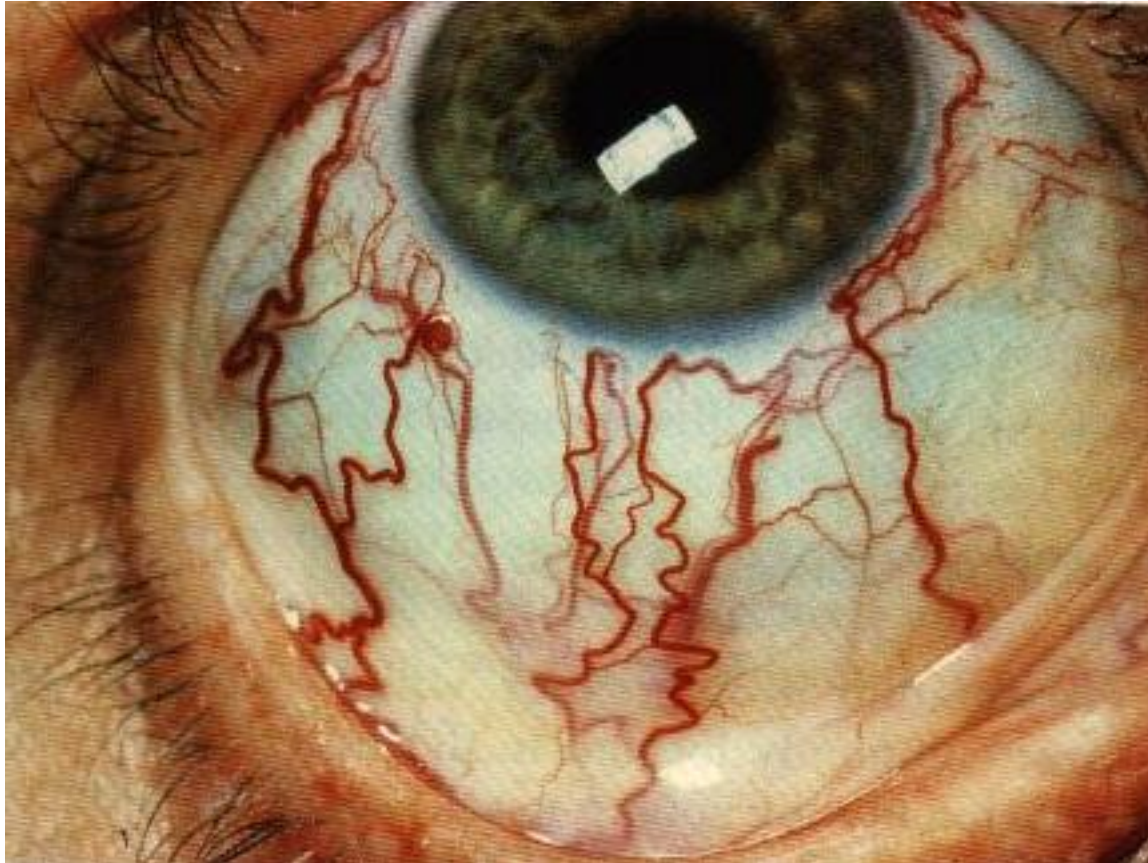




# Bahçet Disease

- Optic Atrophy & Vascular Occlusion.
- End Stage Bahçet Disease.





## **Carotid-Cavernous Communication**

Engorgement of Conjunctival & Episcleral Blood Vessels in a patient with Carotid-Cavernous Communication.



# Marfan Syndrome

- What is this sign?
  - Arachnodactyly: Spider fingers (Marfan Syndrome)
- Mention 2 ocular manifestations that would be associated with it:
  - Lens subluxation
  - Axial myopia (large globe)
  - Early onset glaucoma
  - Retinal Detachment





**Subluxated lens (SuperoTemporally) → Seen in Marfan's Syndrome**

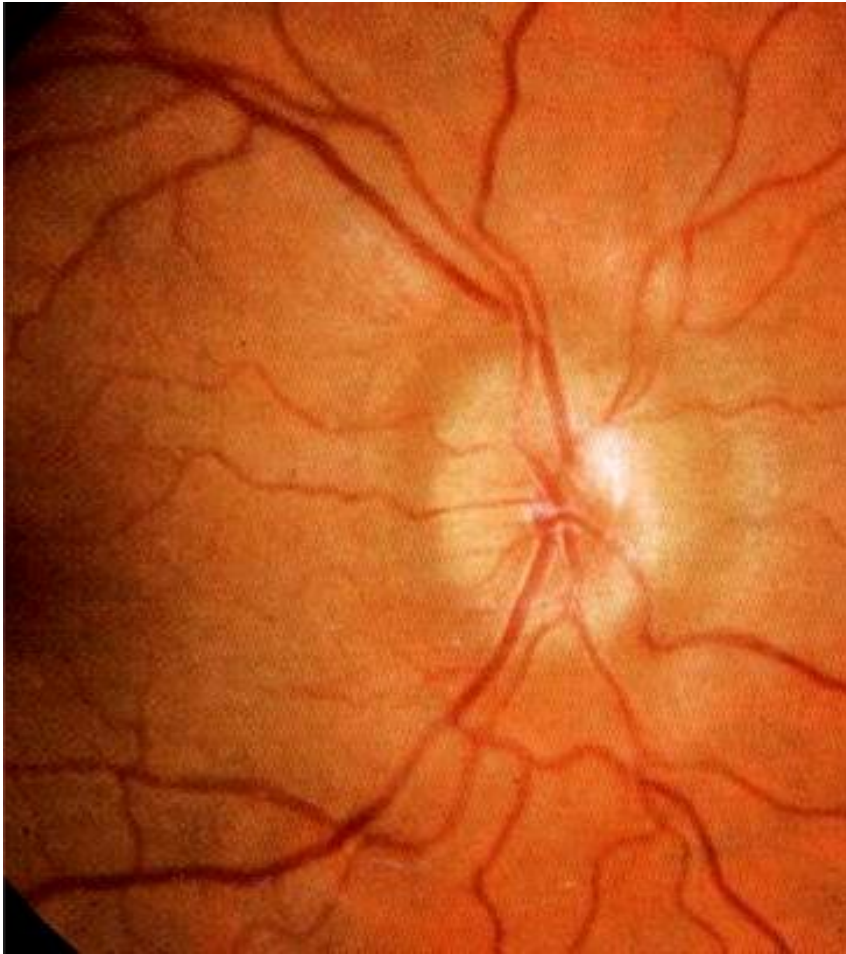
Diagnosis? Lens subluxation

Which systemic disease associated with ? Marfan syndrome

# Post Pan-retinal Photocoagulation



# Papilledema (Bilateral)

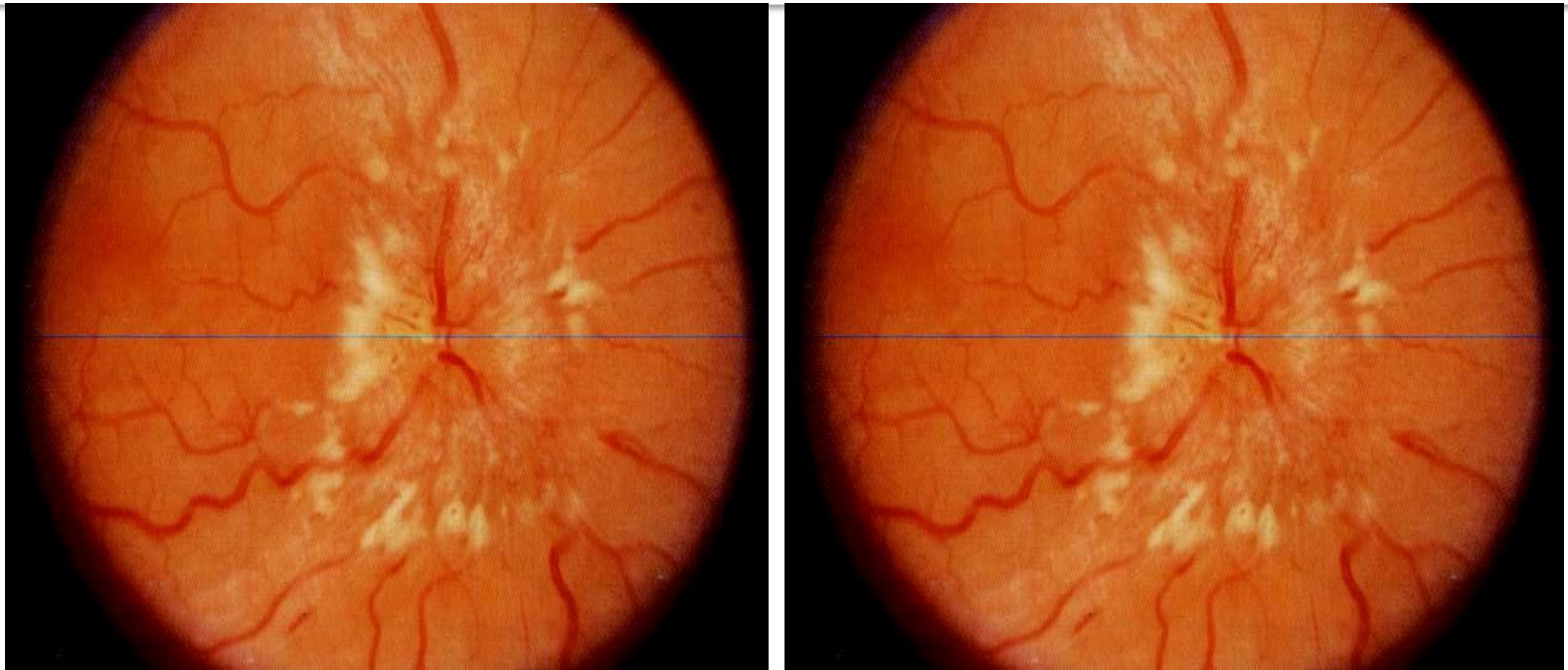


There were multiple slides with the upcoming picture and I tried to summarize the whole thing as to eliminate text repetition but kept the picture on every slide for you to understand that they're all under the same title



# Papilledema

The statement that was present in the original Slide:  
If u see a Bilateral optic disc swelling, it is papilledema

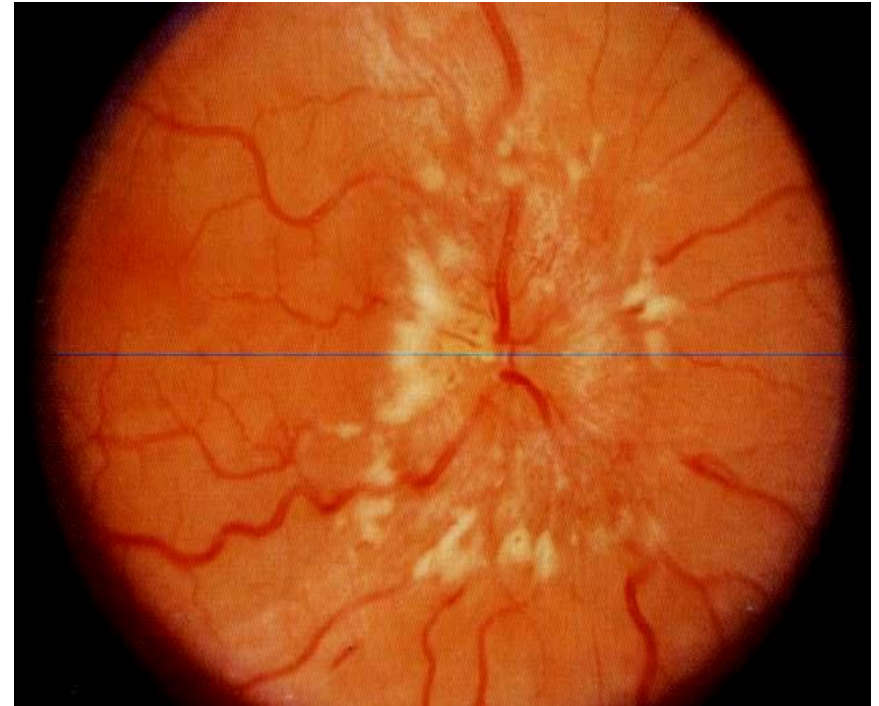


I would also like to point out that that picture is the exact same eye copied twice, I couldn't let it pass without commenting



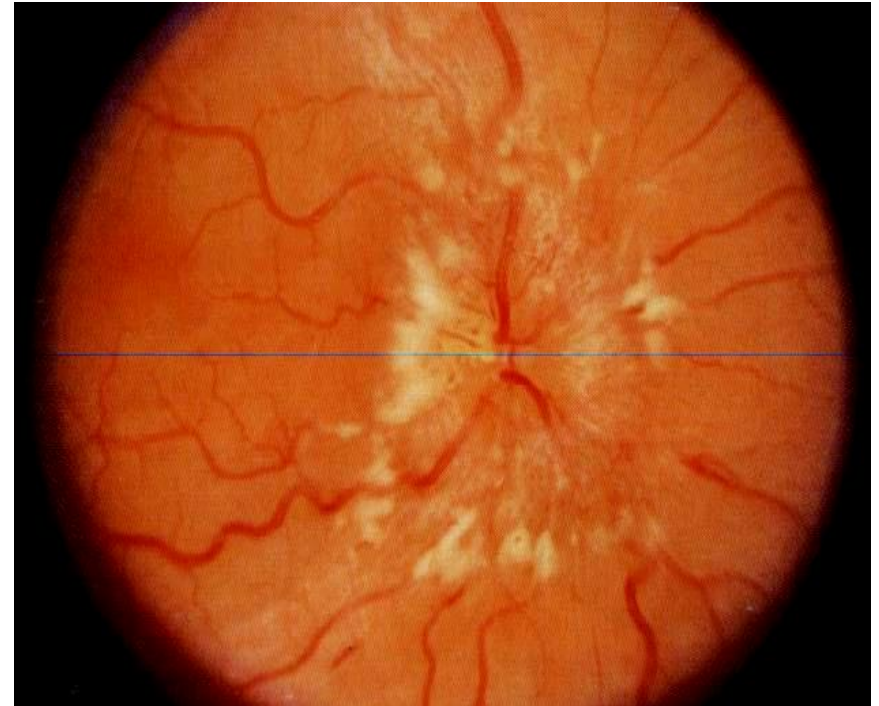
# Papilledema

- This was a bilateral finding in a young obese woman with 120/80 BP. CT scan imaging was negative.
- What is this?
  - Papilledema
- This is commonly associated with:
  - Pseudo tumor cerebri.
  - D.M.
  - H.T.N.
  - SLE
  - RA
  - Benign intracranial HTN
- Form the original Slide:
  - Dr.Otibi said: HTN b/s it is the most common and it is unilateral.



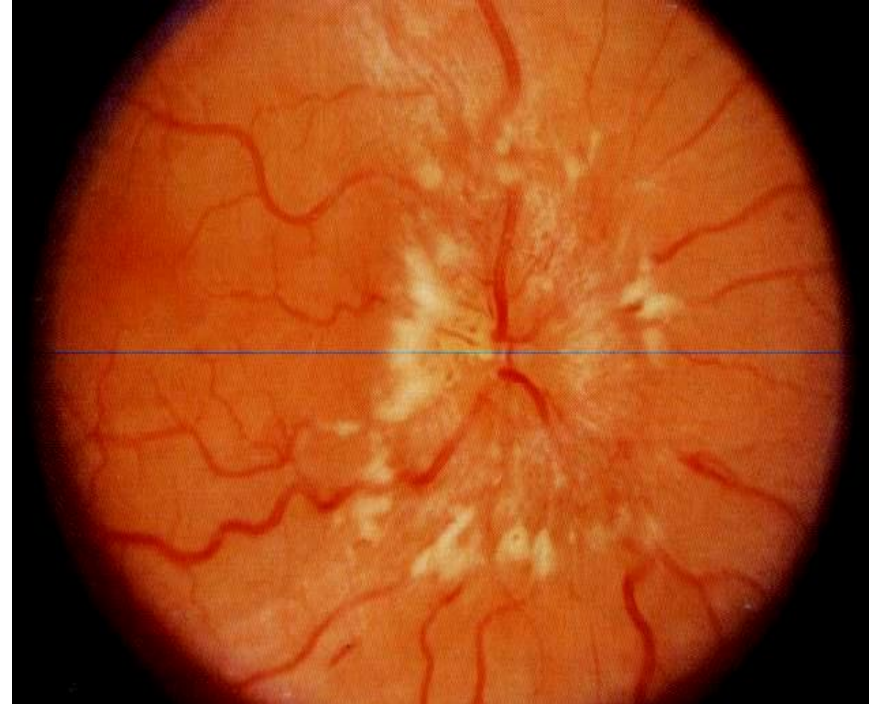
# Papilledema

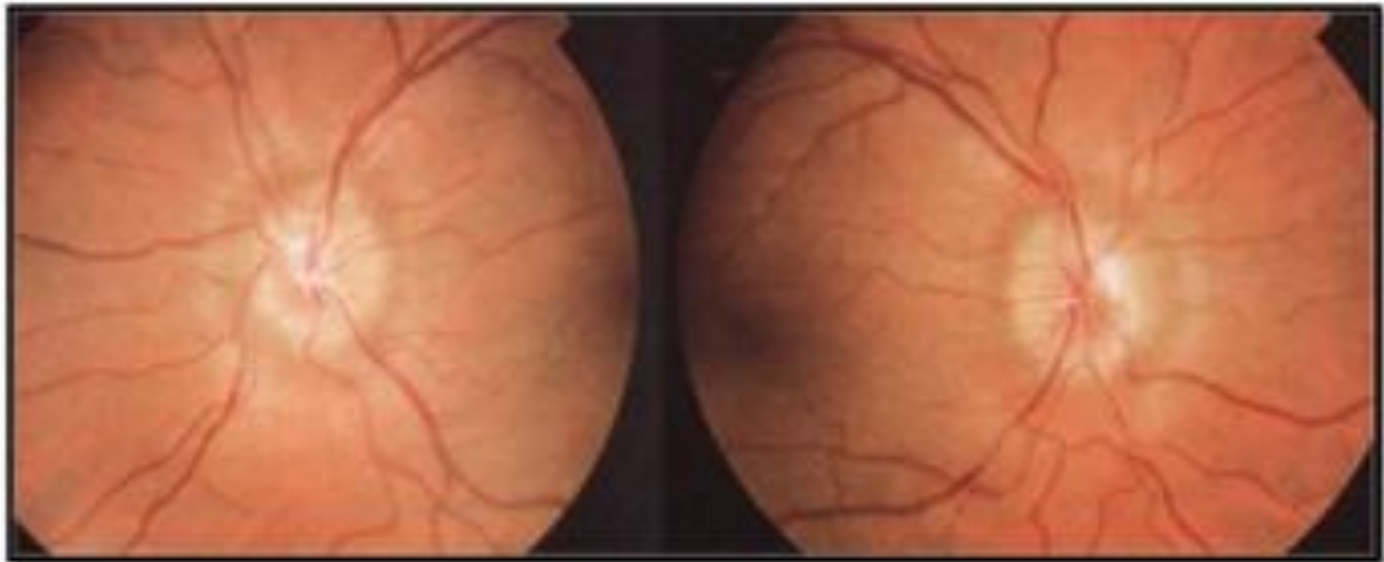
- Management:
  - Depending on the severity
  - Medical:
    - weight reduction and carbonic-anhydrase inhibitors (e.g. acetazolamide)
    - Diuretics, Fluid And Salt restriction
  - Surgical:
    - CSF shunt.



# Papilledema

- Other modalities to confirm?
  - Spinal Tap (Lumbar Puncture)
  - Some students wrote MRI ← ???





8) Select the CORRECT answer:

- a. Retinal surgery is needed.
- b. Associated with hypertension.
- c. Associated with age related macular degeneration.
- d. Seen with rheumatoid arthritis.
- e. Associated with hyperthyroidism.

# Not Edited!

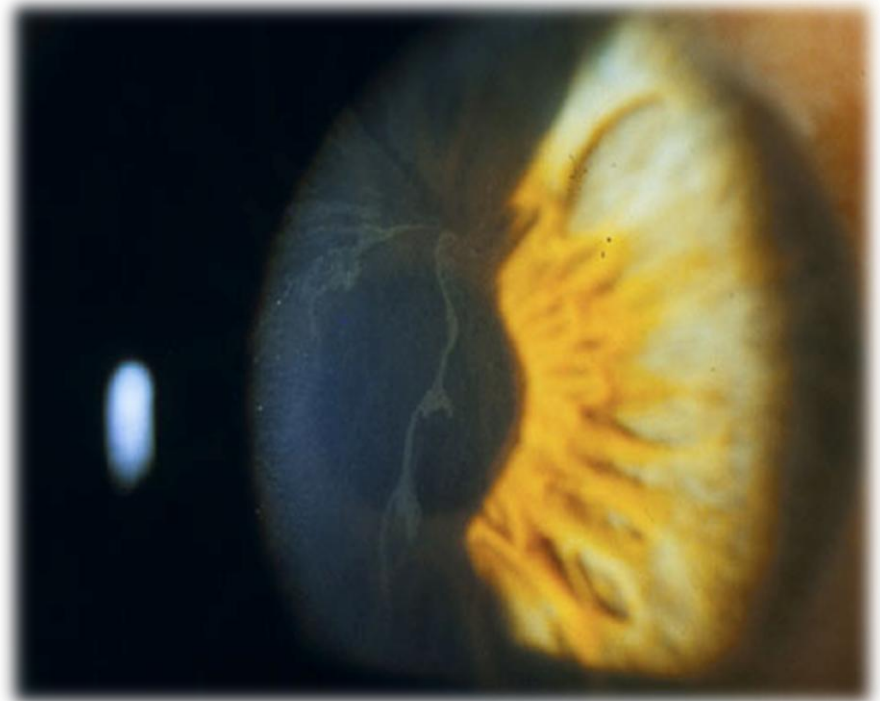
- Optic Nerve Edema.
  - Exudates.
  - Cotton wool.
  - Blurring of optic disc (you can't say where the disc ends & the Retina Starts).
  - Flame-Shaped Hemorrhage.
- DDx:
  - **Optic Neuritis:** (↓ Visual Acuity) Systemic Steroids? , HTN, ↑ I.C.P., Nutritional, Syphilis.
  - **Papilledema:** BILATERAL, 2ry to ↑I.C.P. With Enlarged Blind Spot.





# Rheumatoid Arthritis

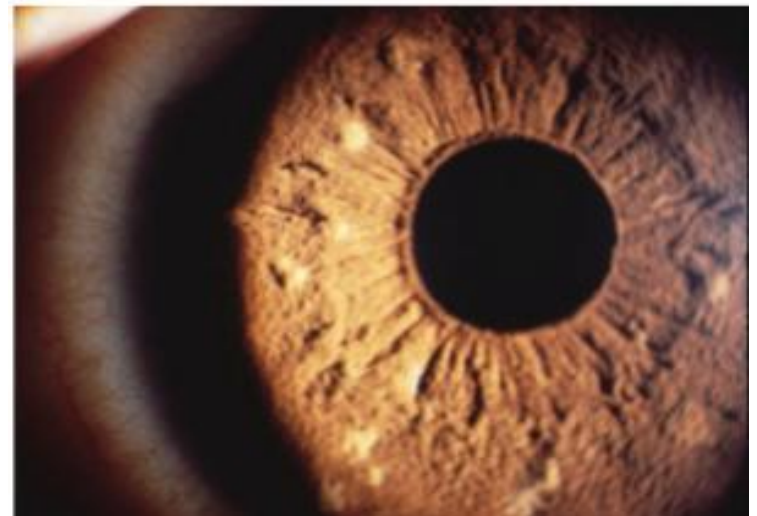
- Rheumatoid Arthritis patient
- What is the Drug used:
  - Chloroquine
- Other sign patient could present with :
  - Corneal vortex keratopathy





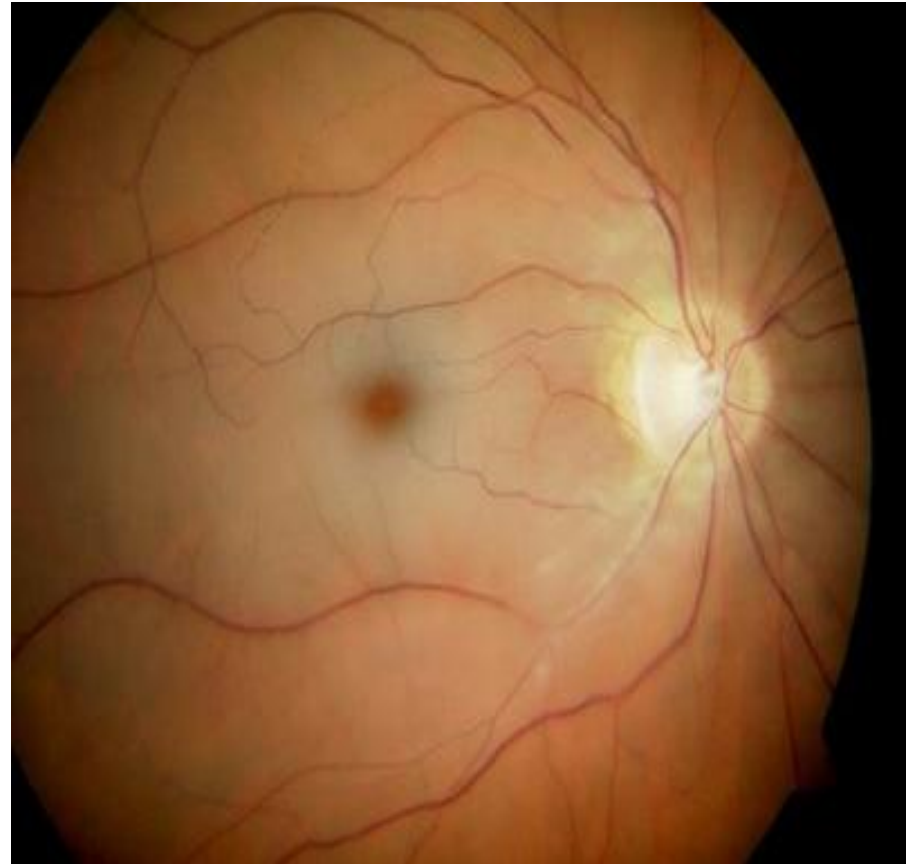
# Neurofibromatosis

- What is the systemic Disease?
  - Neurofibromatosis
- What is the name of the lesion in the Iris?
  - Lisch Nodules
- Other manifestations?
  - Sphenoidal hypoplasia
  - “Pulsatile Proptosis”
  - Plexiform Neurofibromas
  - Choroid Hamartomas
  - Optic Nerve Gliomas
  - Permanent Corneal Nerves



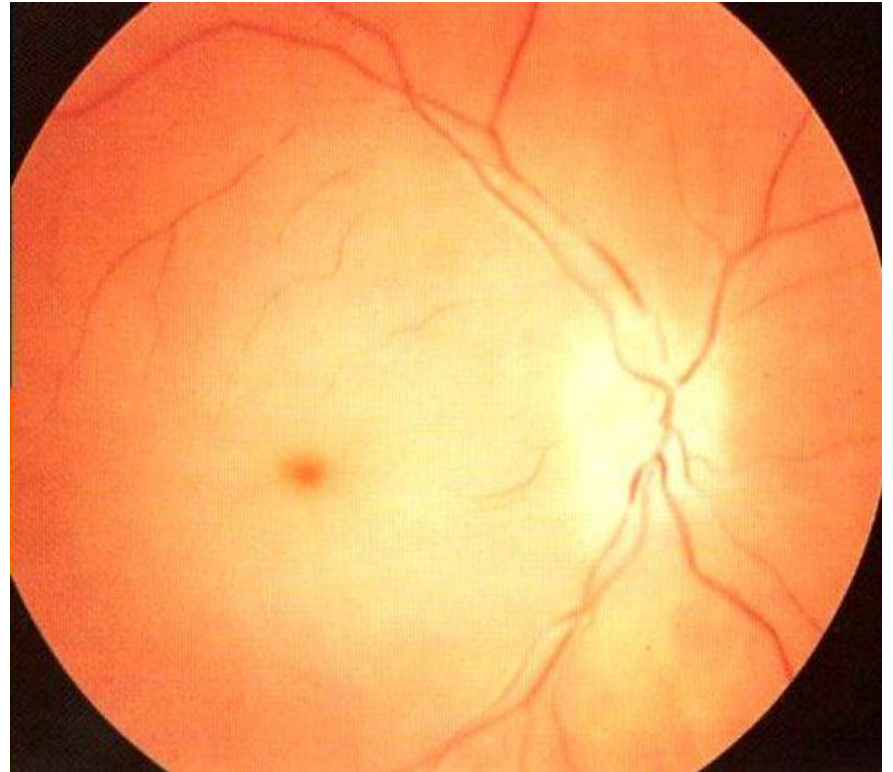
# Central Retinal Artery Occlusion

- Cherry Red spot sign
- Marcus Gunn Pupil
- Causes:
  - HTN
  - DM
  - Giant Cell Arteritis
  - Emboli
  - Carotid Artery disease
  - Atherosclerosis
  - Blood diseases
- Treatment
  - Restore blood flow in the 1<sup>st</sup> 2 days
  - supine position
  - ocular massage
  - IV acetazolamide & topical beta blockers



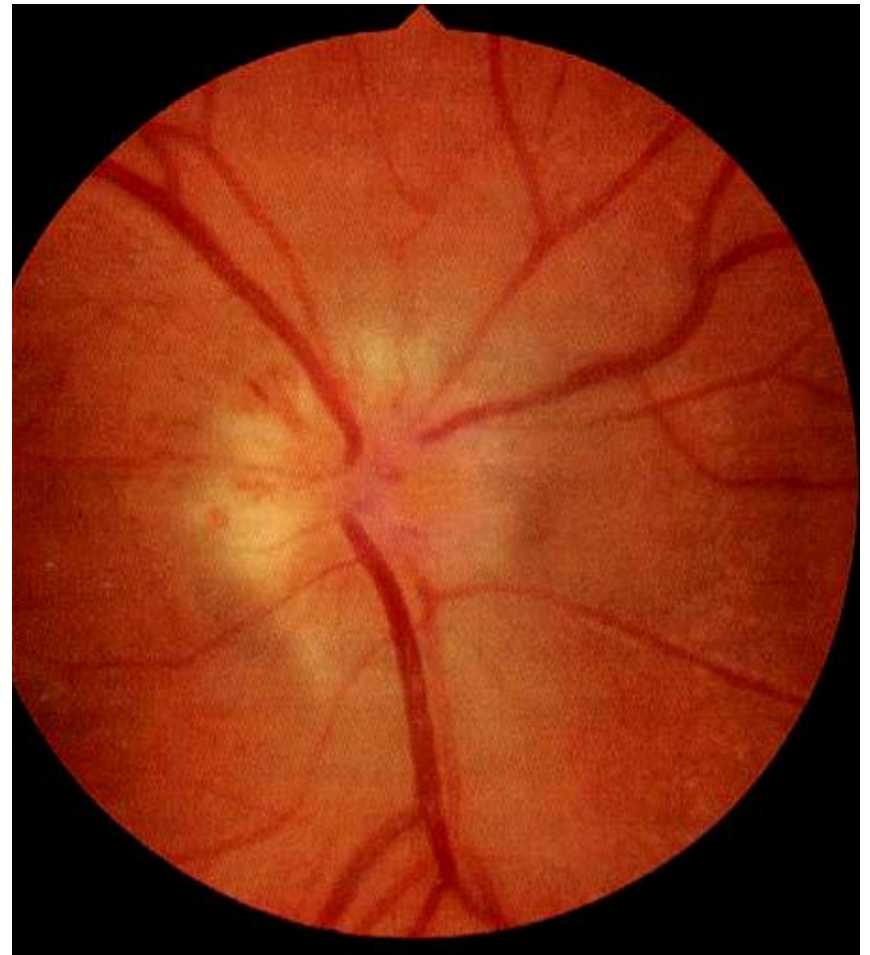
# Central Retinal Artery Occlusion

- What is the name of this sign ?
  - Cherry-red spot
- Diagnosis?
  - CRAO in the right eye



# Not Edited

- Optic Nerve Edema:  
(With Marked Venous  
Congestion).
  - Hemorrhages.
  - Cotton Wool.



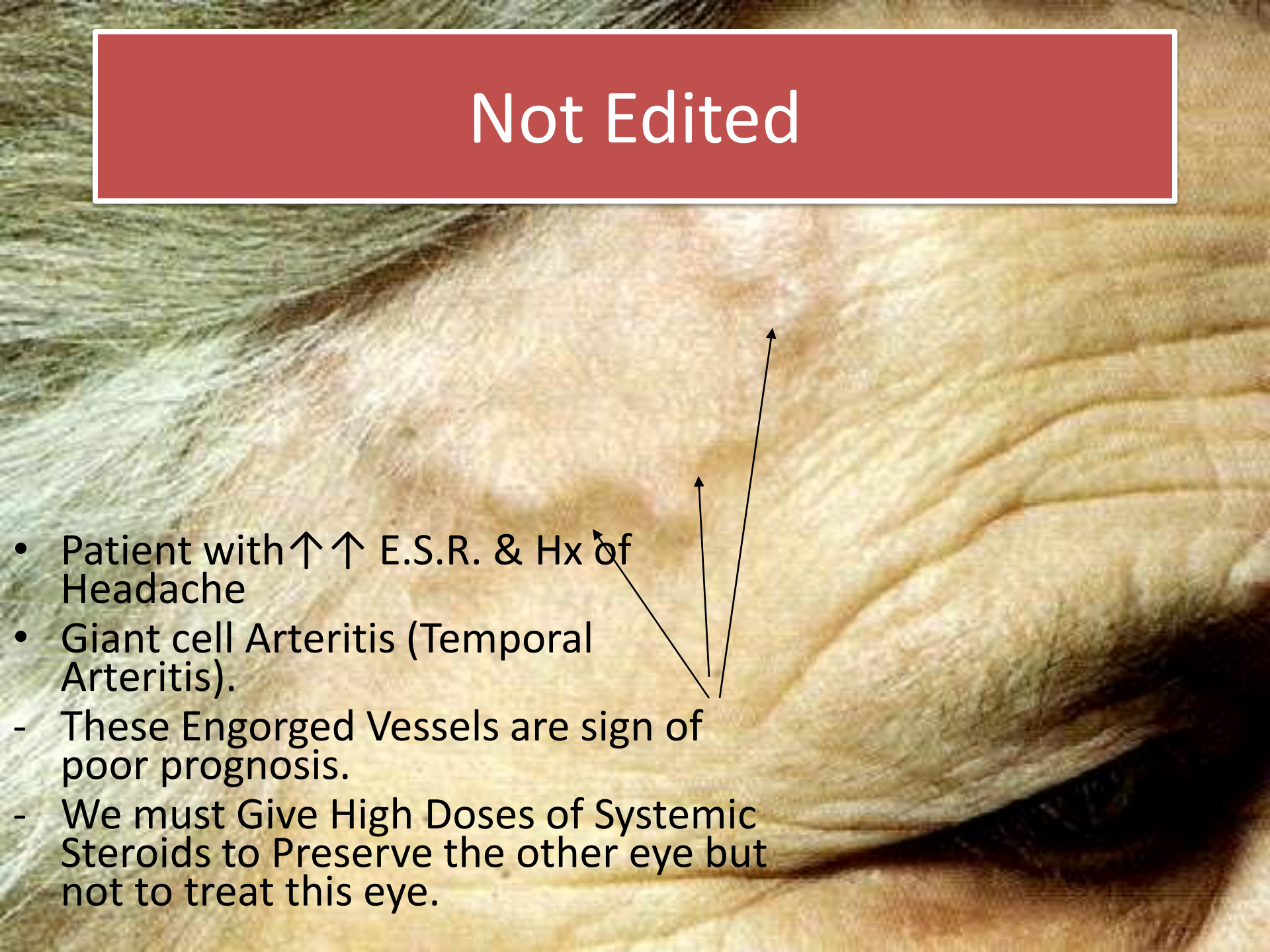
# Not Edited

- Optic Disc Atrophy:  
Milky white optic head  
(شمس)





# Not Edited

- 
- Patient with ↑↑ E.S.R. & Hx of Headache
  - Giant cell Arteritis (Temporal Arteritis).
  - These Engorged Vessels are sign of poor prognosis.
  - We must Give High Doses of Systemic Steroids to Preserve the other eye but not to treat this eye.

# SLE

- 20 year old female with this coetaneous manifestation
- Name the diagnosis for this condition ?
  - SLE causing butterfly rash
- Name one ocular manifestation associated with this disease ?
  - Retinopathy & Keratitis (make sure of the answer plz)
  - Lupus retinopathy consists of cotton-wool spots, perivascular hard exudates, retinal haemorrhages and vascular tortuosity



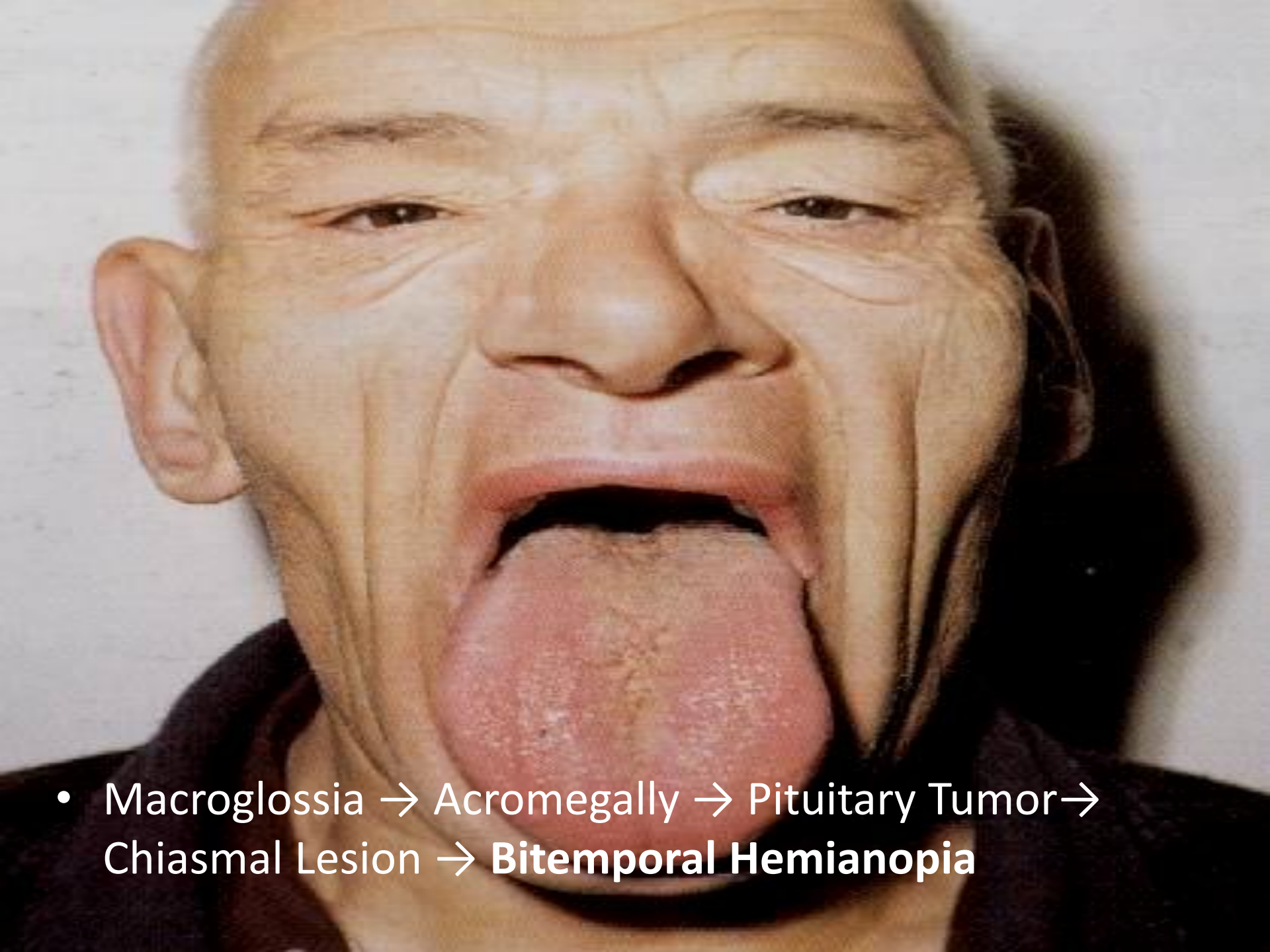
# SLE Butterfly Rash





# Vitiligo





- Macroglossia → Acromegally → Pituitary Tumor → Chiasmal Lesion → **Bitemporal Hemianopia**



# Not Edited



6) All of the following falls EXCEPT:

- a. It may come with diabetic patient.
- b. She had bilateral lid retraction.
- c. ???
- d. We need to measure TSH & do CT Scan.



# Not Edited

65 year old male came with :

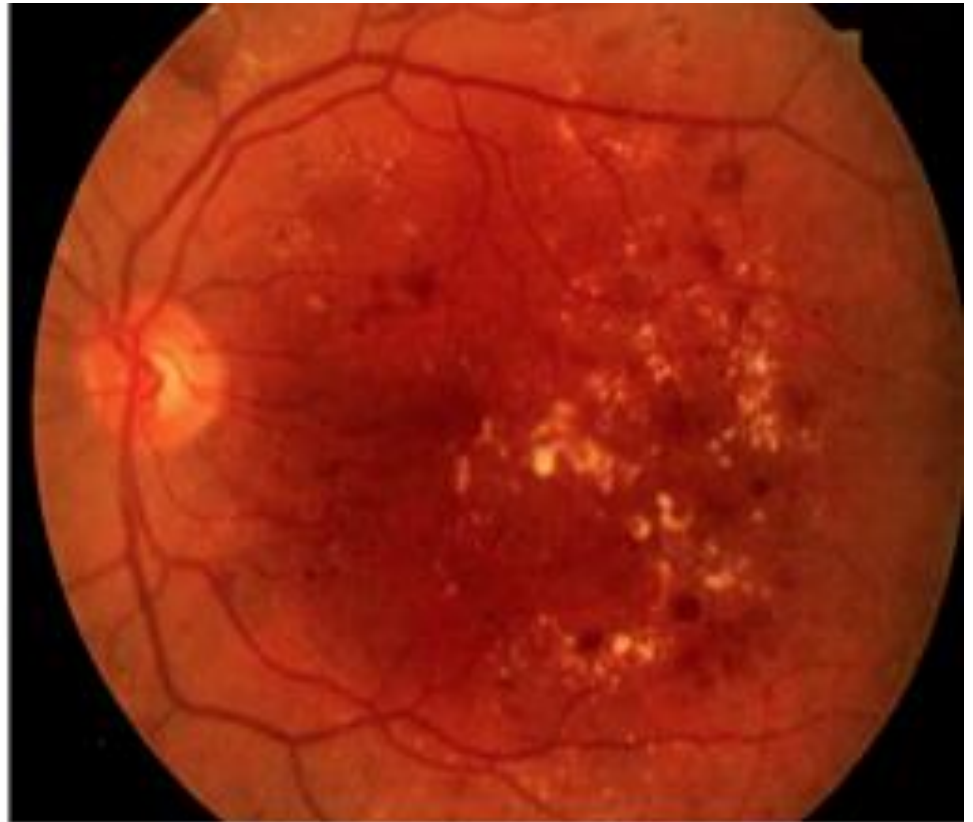
Decrease vision & complaining of systemic disease , which is true :

A- non- proliferative DRP is the most likely diagnosis

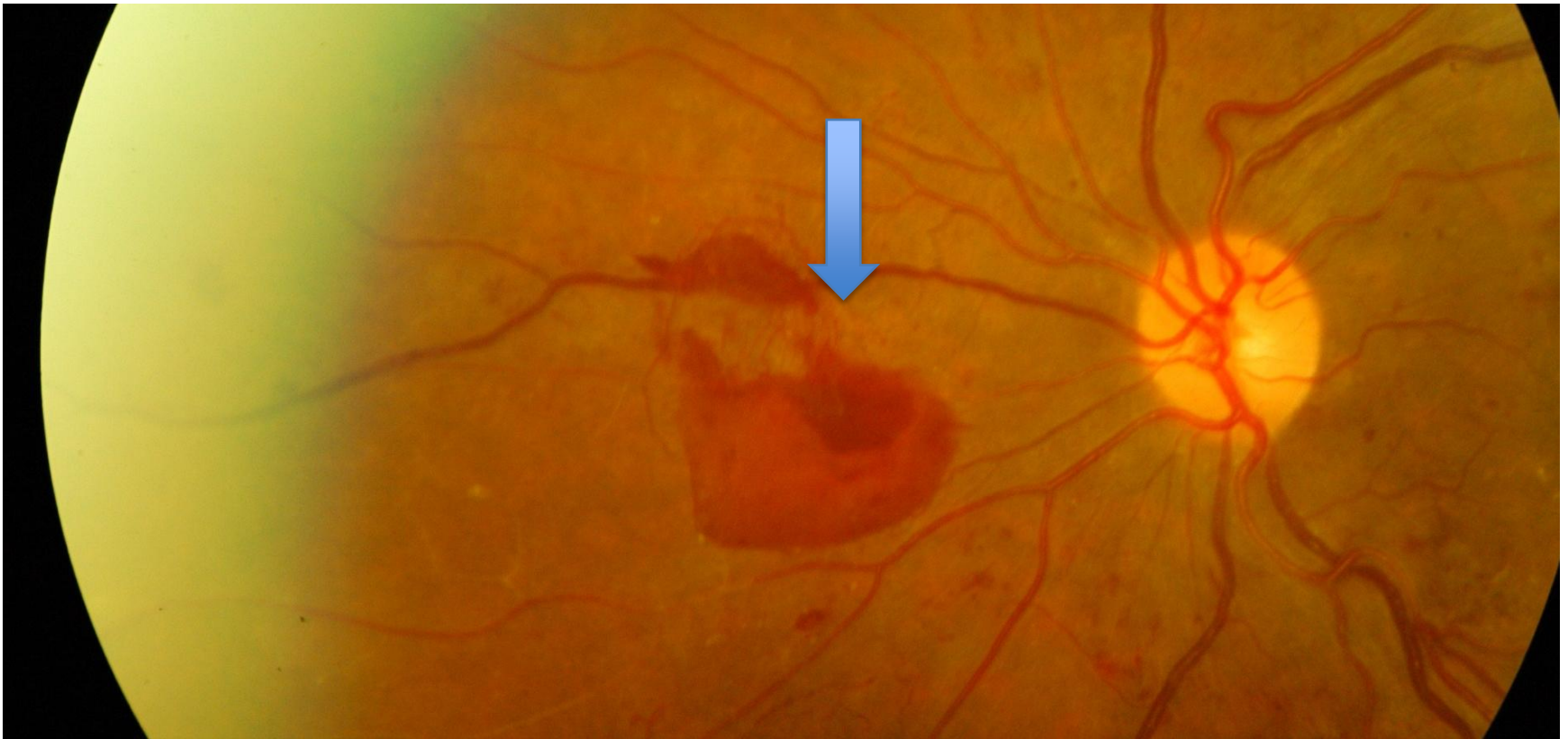
B- vitrectomy & PRP for treatment

C- no need for treatment & follow up after 6 month

D- laser treatment associated with improvement of vision



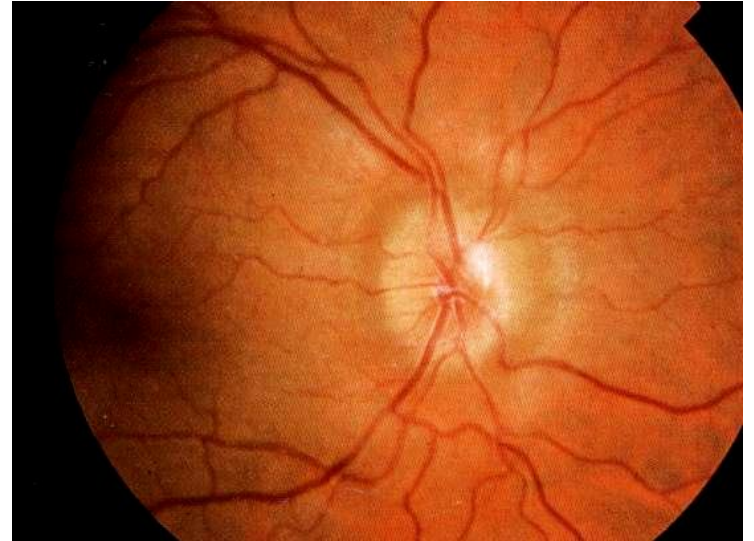
Not Edited



- A) What is the level of this hemorrhage(arrow)?  
B) What is the reason for this hemorrhage in this patient?

# Pseudotumor cerebri

- This is a BILATERAL finding in a 30 years old obese lady complaining of headache, nausea & vomiting. Her CT is normal.
- Diagnosis?
- Idiopathic increase in ICP=pseudotumor cerebri.
- 2- Management?



# Pseudotumor cerebri

Pseudotumor cerebri, also known as idiopathic intracranial hypertension (IIH) is a disorder of unknown etiology. It affects predominantly obese women of childbearing age. The primary problem is chronically elevated intracranial pressure (ICP), and the most important neurologic manifestation is papilledema, which may lead to progressive optic atrophy and blindness.

## Management

### A-Medical:

- 1- Patients without visual loss most often are treated with a carbonic anhydrase inhibitor (eg, acetazolamide) to lower the intracranial pressure (ICP). Some authors believe digoxin has the same effect and is associated with fewer adverse effects.
- 2- In patients with severe symptoms, early visual field loss, or poor response to standard medical therapy, some clinicians utilize a short course of high-dose corticosteroids (eg, prednisone).
- 3- When new visual field loss is documented, medical management should be coupled with plans for emergency surgical intervention if the visual function continues to deteriorate or does not improve immediately with corticosteroid treatment.

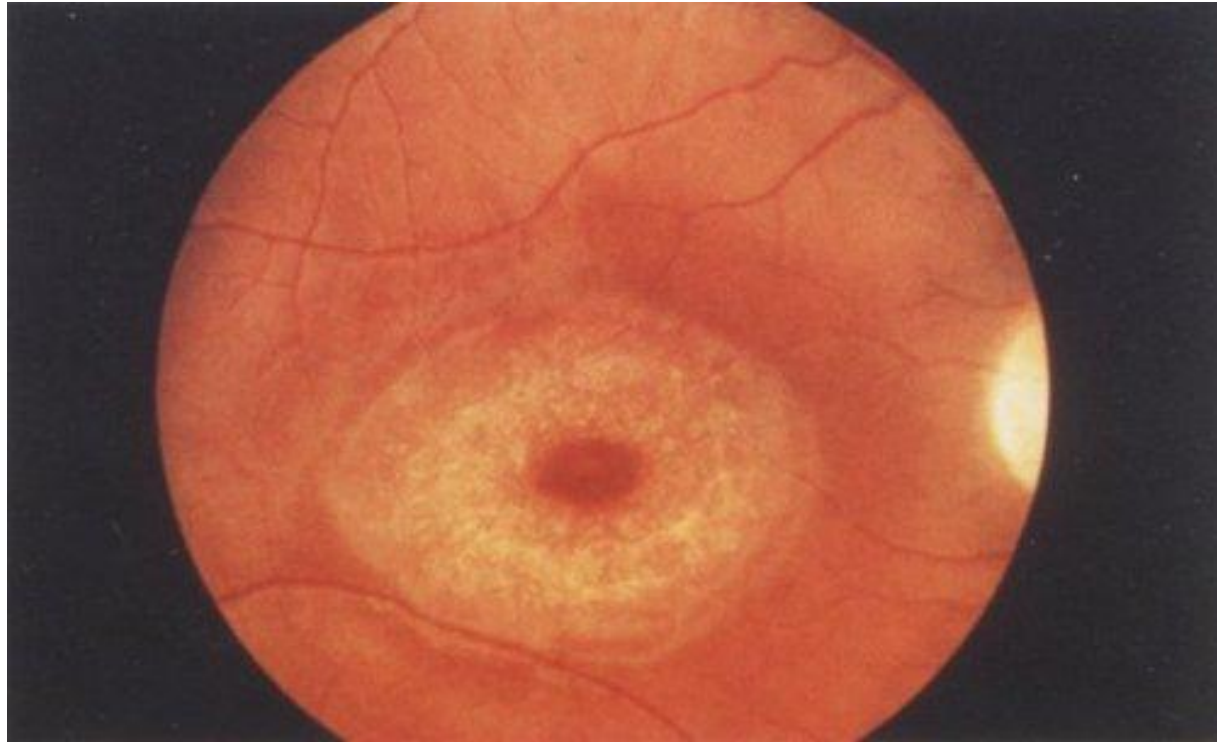


# Pseudotumor cerebri

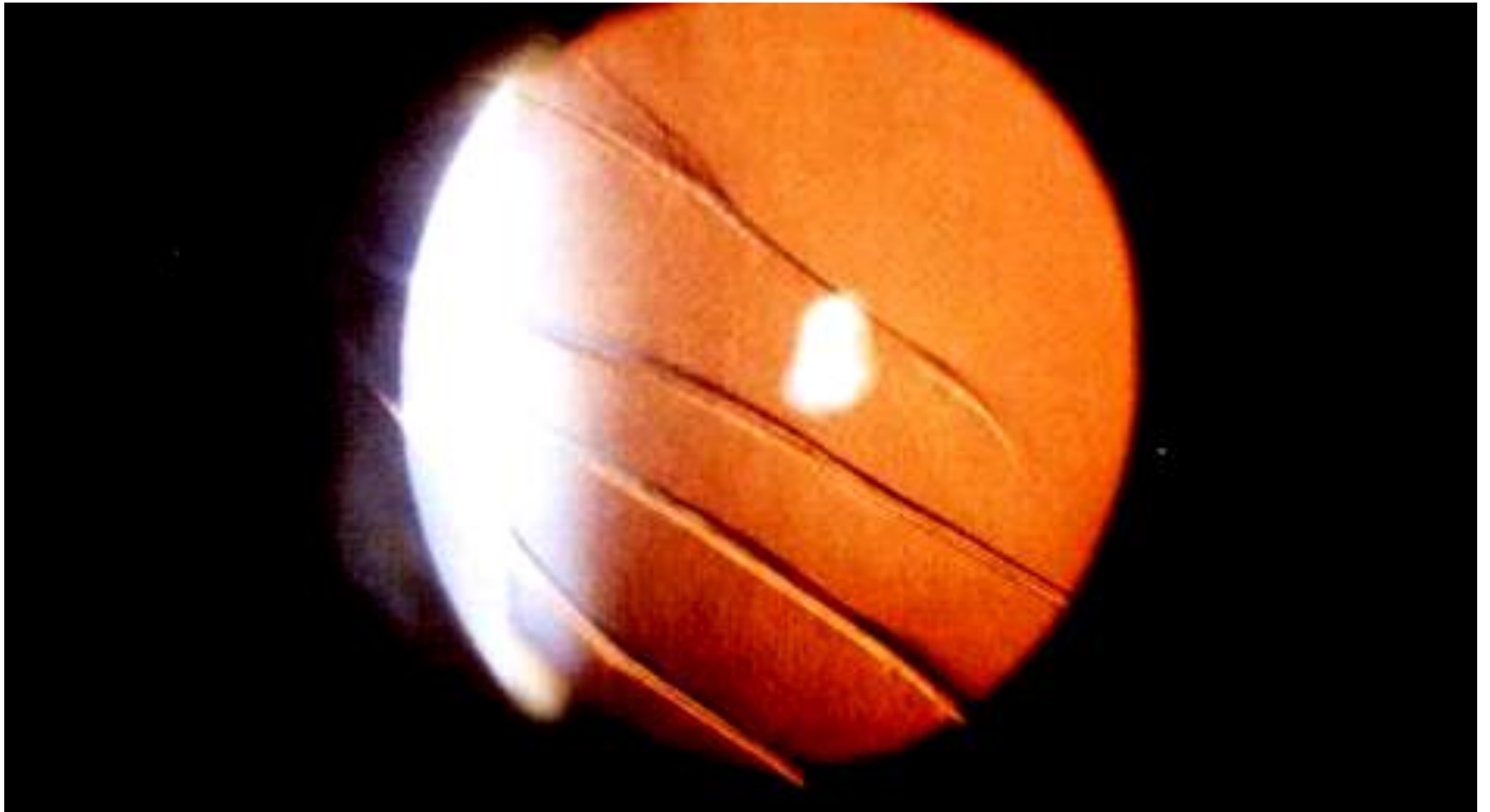
- **B-Surgical :**
- For patients with idiopathic intracranial hypertension (IIH) who have progressive visual field loss, currently 2 general surgical approaches can be considered: CSF shunting procedures or optic nerve sheath fenestration.

[useful link : \)](#)

# bull's eye maculopathy



???



???

