

69th *Année*

ANNUAL REFRESHER COURSE for FAMILY PHYSICIANS
SYMPOSIUM ANNUEL pour LES OMNIPRACTIENS

Hotel Bonaventure Montréal

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McGill

Faculty of
Medicine

Montréal, QC, Canada

Acute Ophthalmic Emergencies

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DISCLOSURE SLIDE

- **No conflict of interest regarding this presentation**

LEARNING OBJECTIVES

- *After attending this lecture, the participant will be able to diagnose and manage the most common ocular emergencies encountered in the office or emergency room setting.*

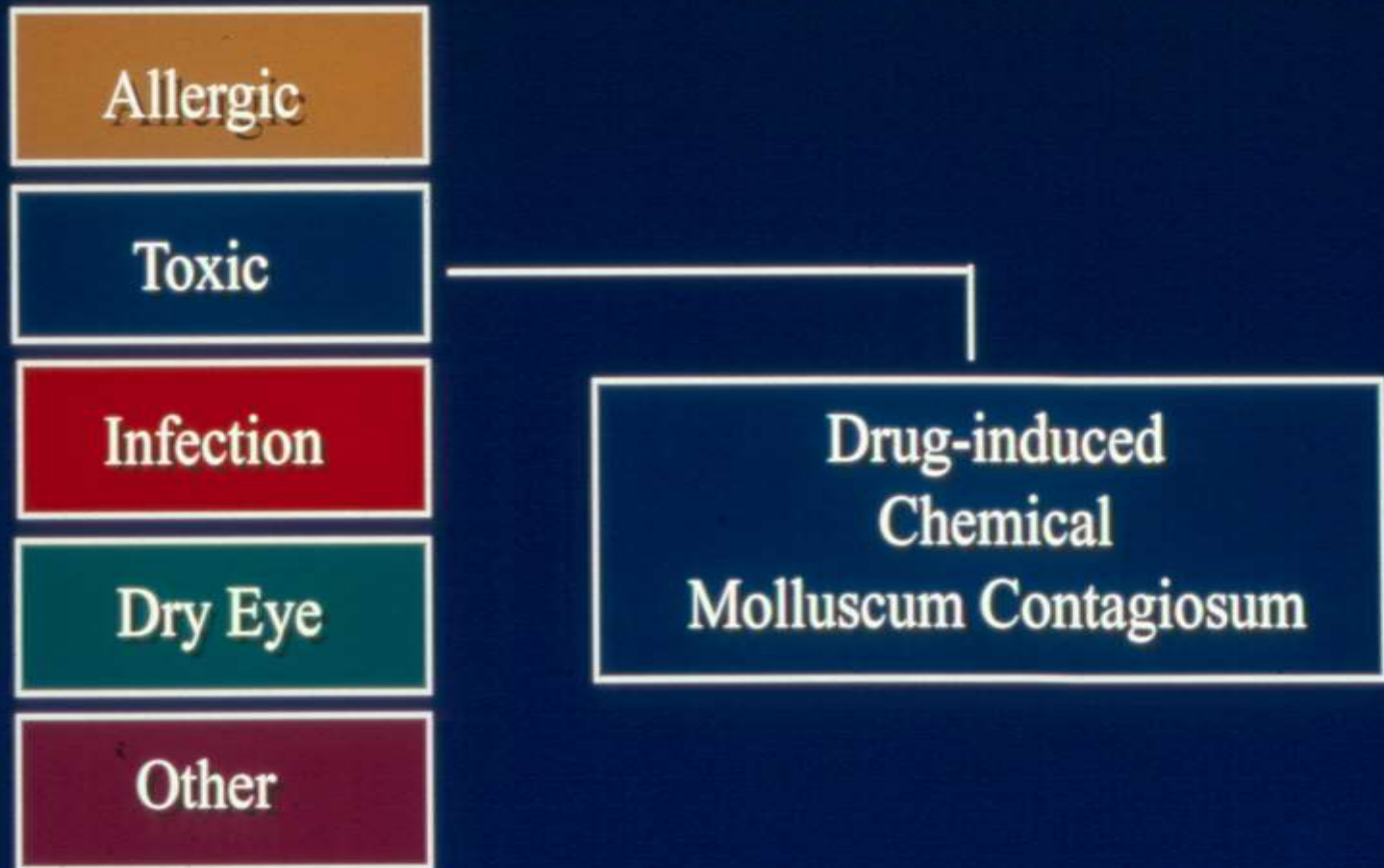
CONJUNCTIVITIS

Differential Diagnosis



CONJUNCTIVITIS

Differential Diagnosis



CONTACT DERMATOCONJUNCTIVITIS

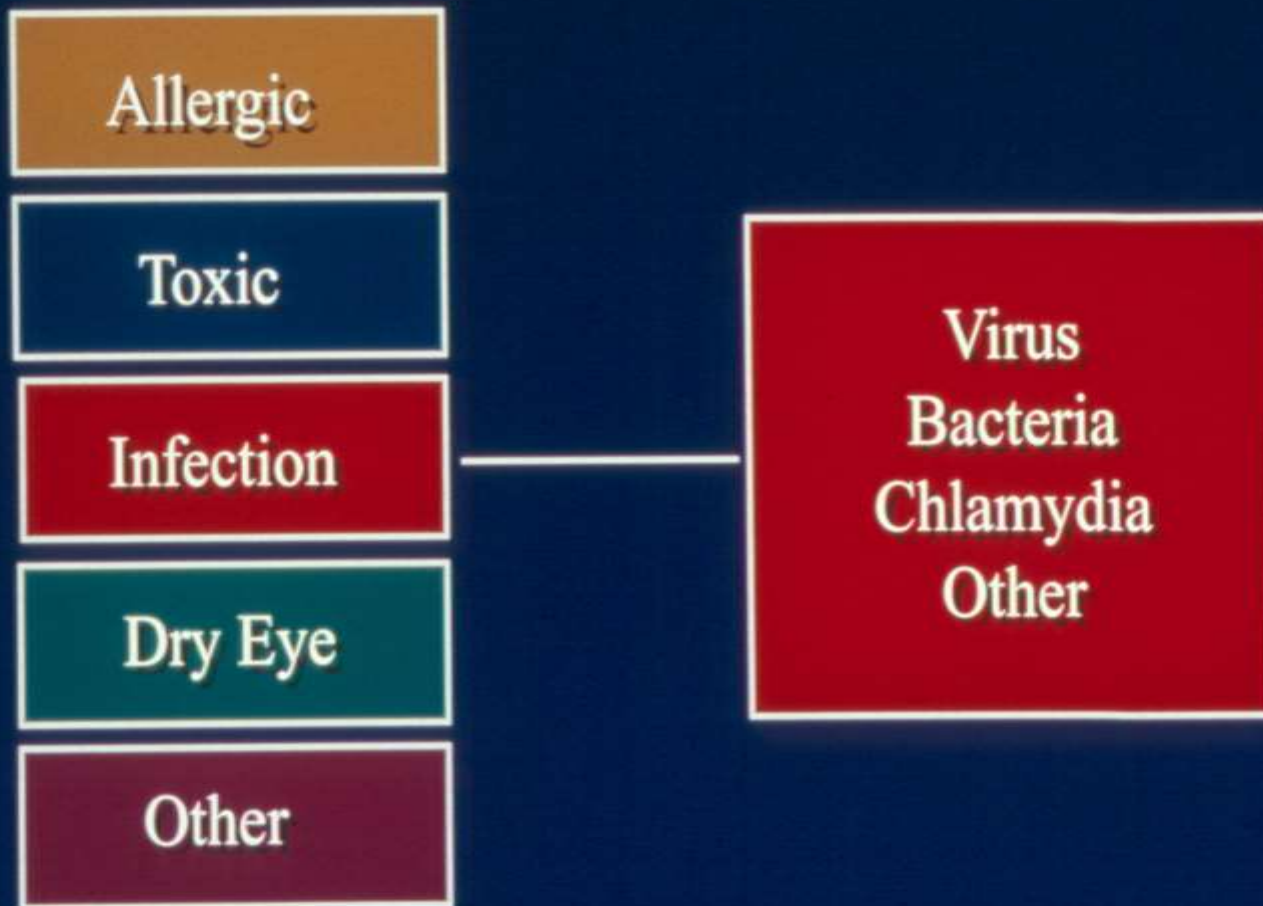
Delayed hypersensitivity
reaction to drug or
preservative

- Conjunctival injection
- Lid erythema



CONJUNCTIVITIS

Differential Diagnosis



VIRAL CONJUNCTIVITIS

A 10-year-old

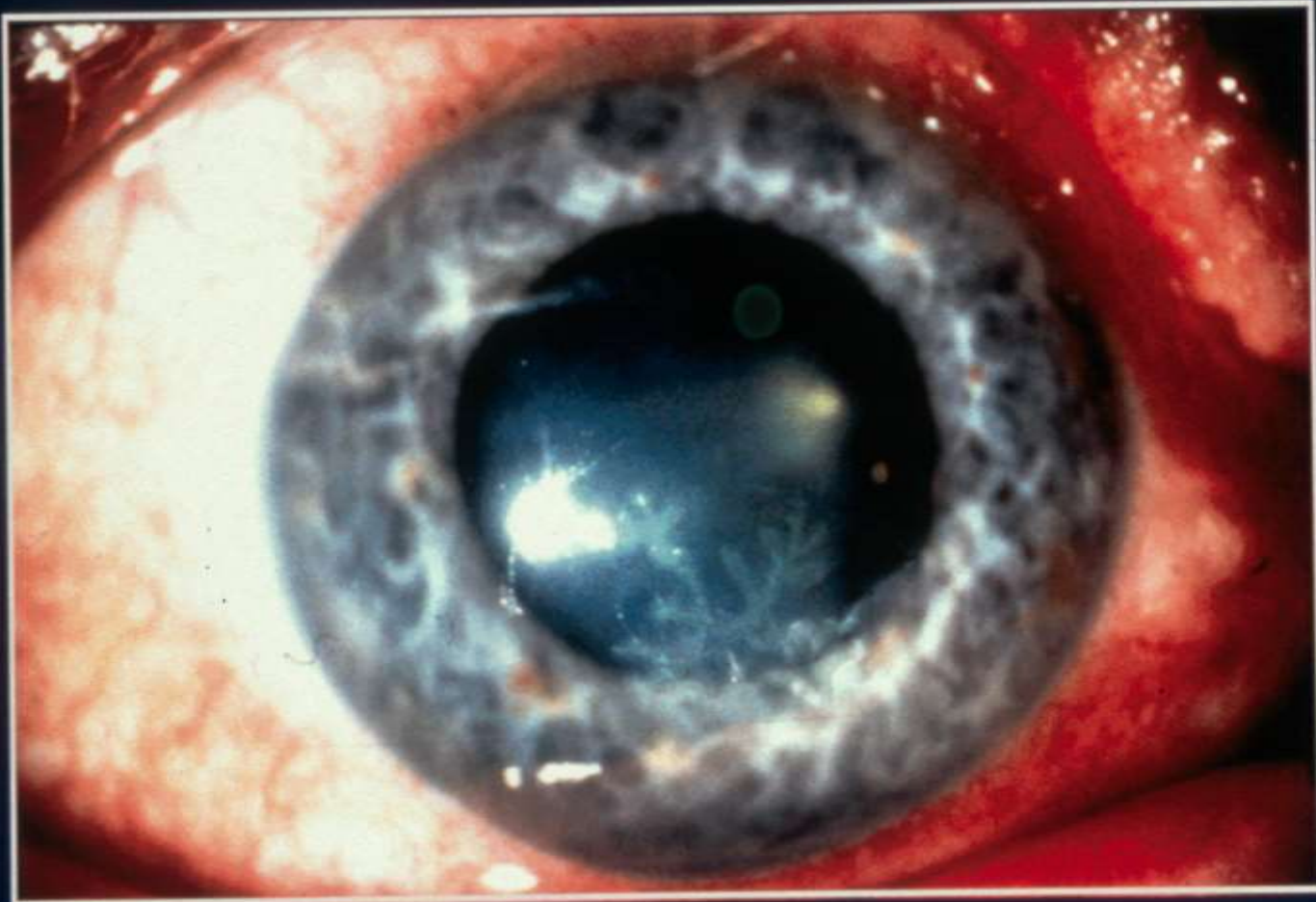


Conjunctival
bulbar &
conjunctiva



VIRAL KERATOCONJUNCTIVITIS

Herpes Simplex



BACTERIAL CONJUNCTIVITIS



Purulent discharge

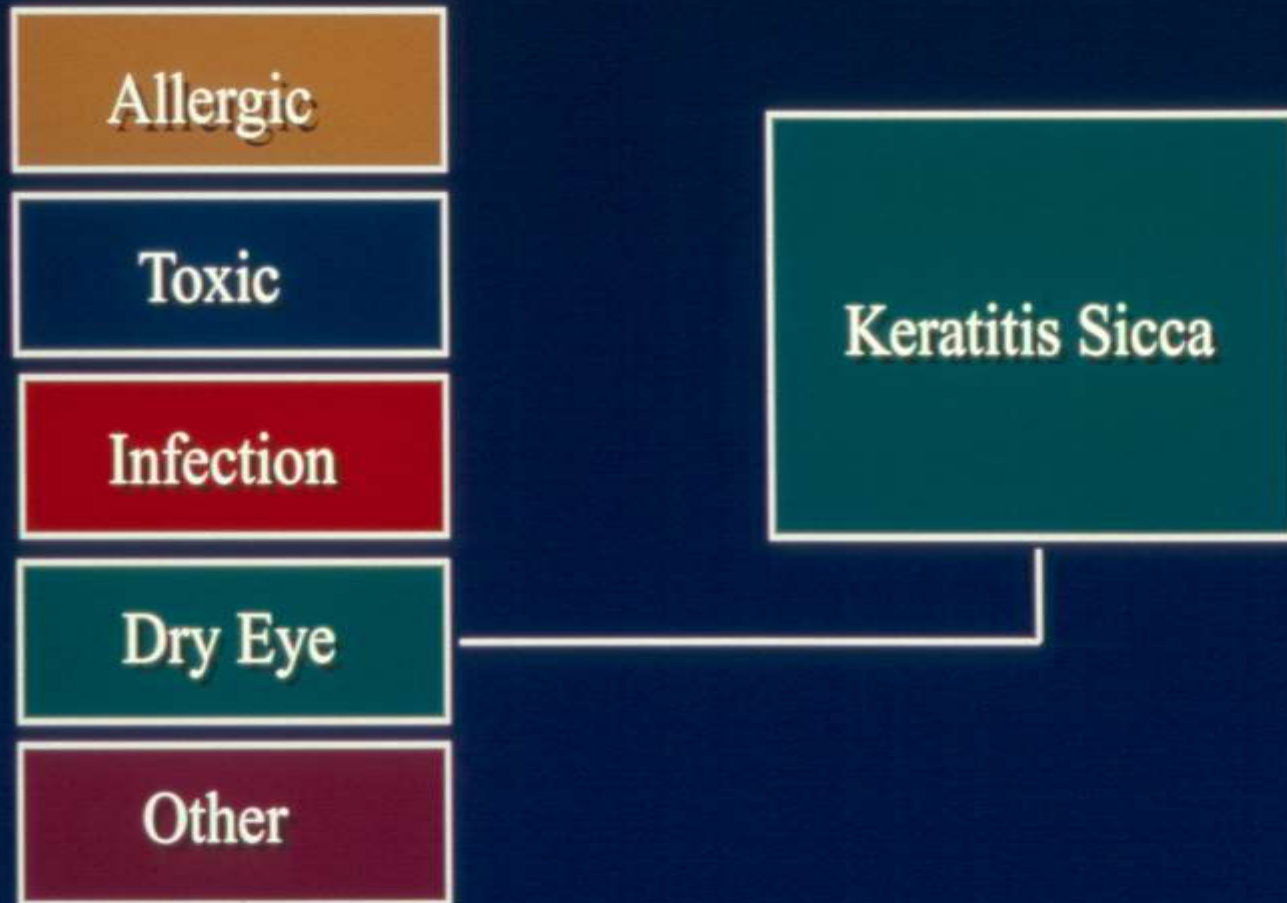
BACTERIAL CONJUNCTIVITIS

Treatment

- Most cases self-limiting
- Treatment shortens the course, improves comfort, limits spread of disease
- If associated with generalized infection eg otitis media or pneumonia, systemic antibiotics indicated.
- If associated with contact lens wear be aware of possible corneal ulcer
- Topical antibiotics (broad spectrum)
 - Fluoroquinolones eg Ciloxan
 - Aminoglycoside eg Tobrex
- If infection not clearing on day 4, take a culture and switch antibiotics

CONJUNCTIVITIS

Differential Diagnosis



Influential Factors

Adverse Conditions



Arid Conditions
(e.g. Winter)



Windy Environments
(e.g. air conditioning,
forced heat)



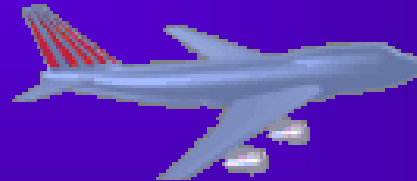
Pollutants
(e.g. exhaust, smoke,
smog)

Influential Factors - continued

Adverse Conditions



Visual Tasking
(e.g. PC use)



Arid Conditions
(e.g. airplanes)



Food / Alcohol
(e.g. drinking)

DRY EYE

Keratitis Sicca

Treatment

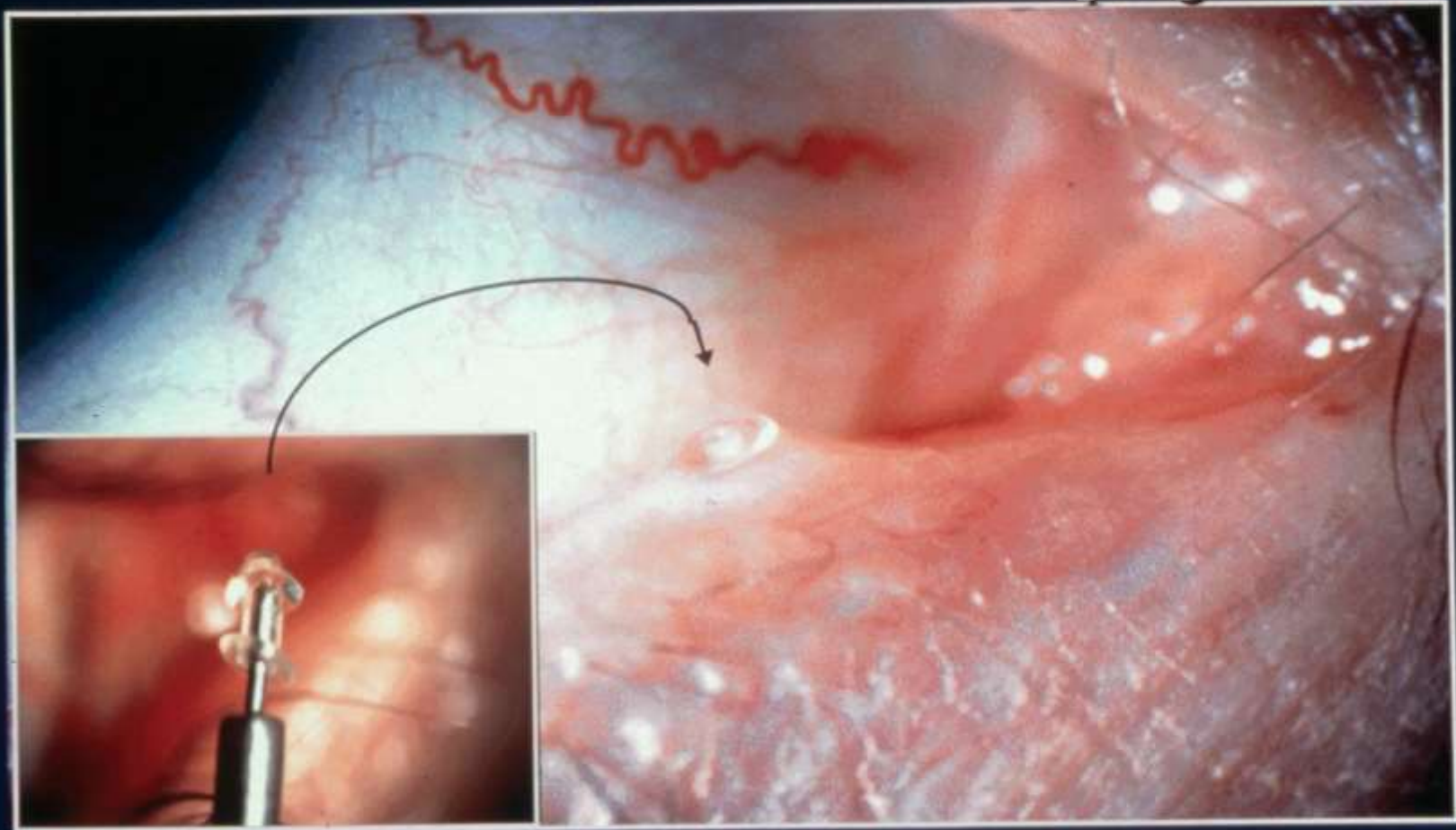
- Artificial tears prn
- Lubricating ointment qhs
- Humidifier
- Punctal occlusion

Temporary - Silicone plugs

Permanent - Cautery

DRY EYE

Punctal plugs



Plugs decrease the drainage of tears.

CONJUNCTIVITIS

Differential Diagnosis

Masquerade Conditions

Allergic

Toxic

Infection

Dry Eye

Other

- Nasolacrimal duct obst.
- Iritis
- Acute glaucoma
- Corneal ulcer
- Episcleritis/scleritis
- Graves disease
- Floppy lid syndrome
- Ocular pemphigoid
- Etc.

Less Common

Require Referral

IRITIS



Clinical Features Decreased vision, photophobia, ciliary flush, keratic precipitates, cells in A/C, miosis

Treatment Topical steroid & cycloplegic agent

Differential Diagnosis - Clues

If the eye
burns,



it's dry eye.

If the eye
itches,



it's allergy.

If the eye is
sticky,



it's bacterial
conjunctivitis.

ACUTE VISUAL LOSS

- Rapid decrease in visual acuity over a short period of time (hours to days)

Retinal Detachment

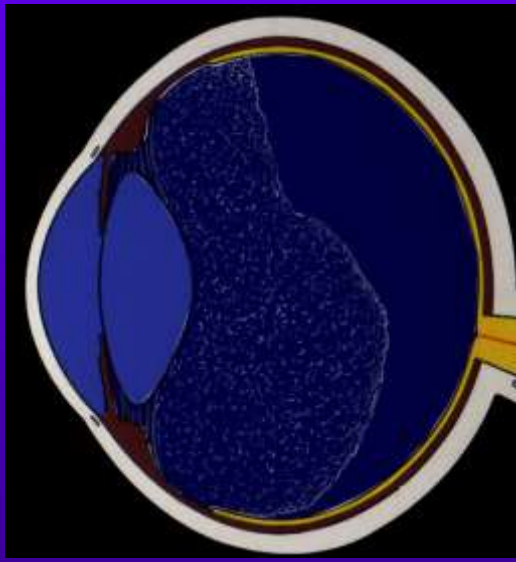


Pathogenesis of rhegmatogenous RD

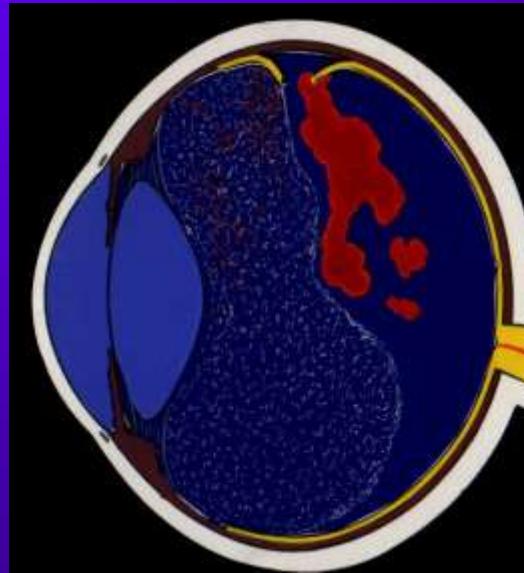
Two components for retinal break formation

- Acute posterior vitreous detachment (PVD)
- Predisposing peripheral retinal degeneration

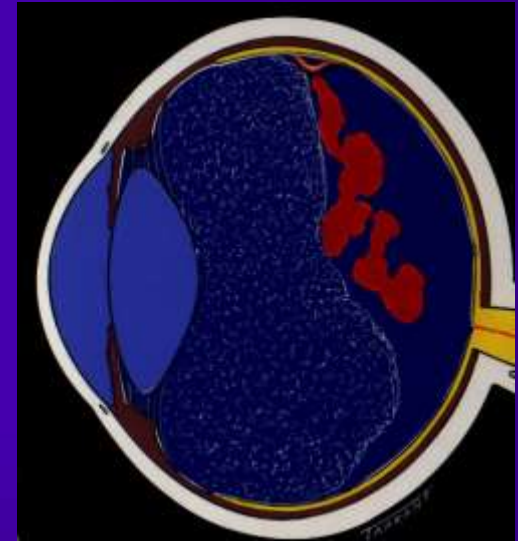
Possible sequelae of acute PVD



**Uncomplicated PVD
(85%)**



**Retinal tear formation
and haemorrhage (10-
15%)**



**Avulsion of retinal vessel
and haemorrhage
(uncommon)**

Technique of laser photocoagulation



Surround lesion with two rows of confluent burns

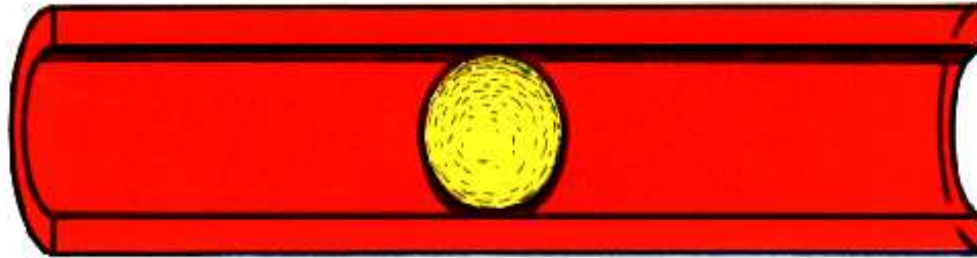


Difficult for anterior lesions and if media hazy

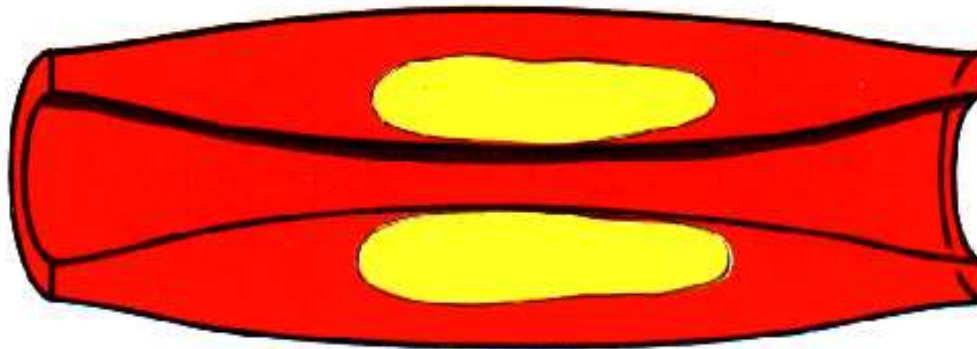
RETINAL VASCULAR OCCLUSION

Causes of retinal artery occlusion

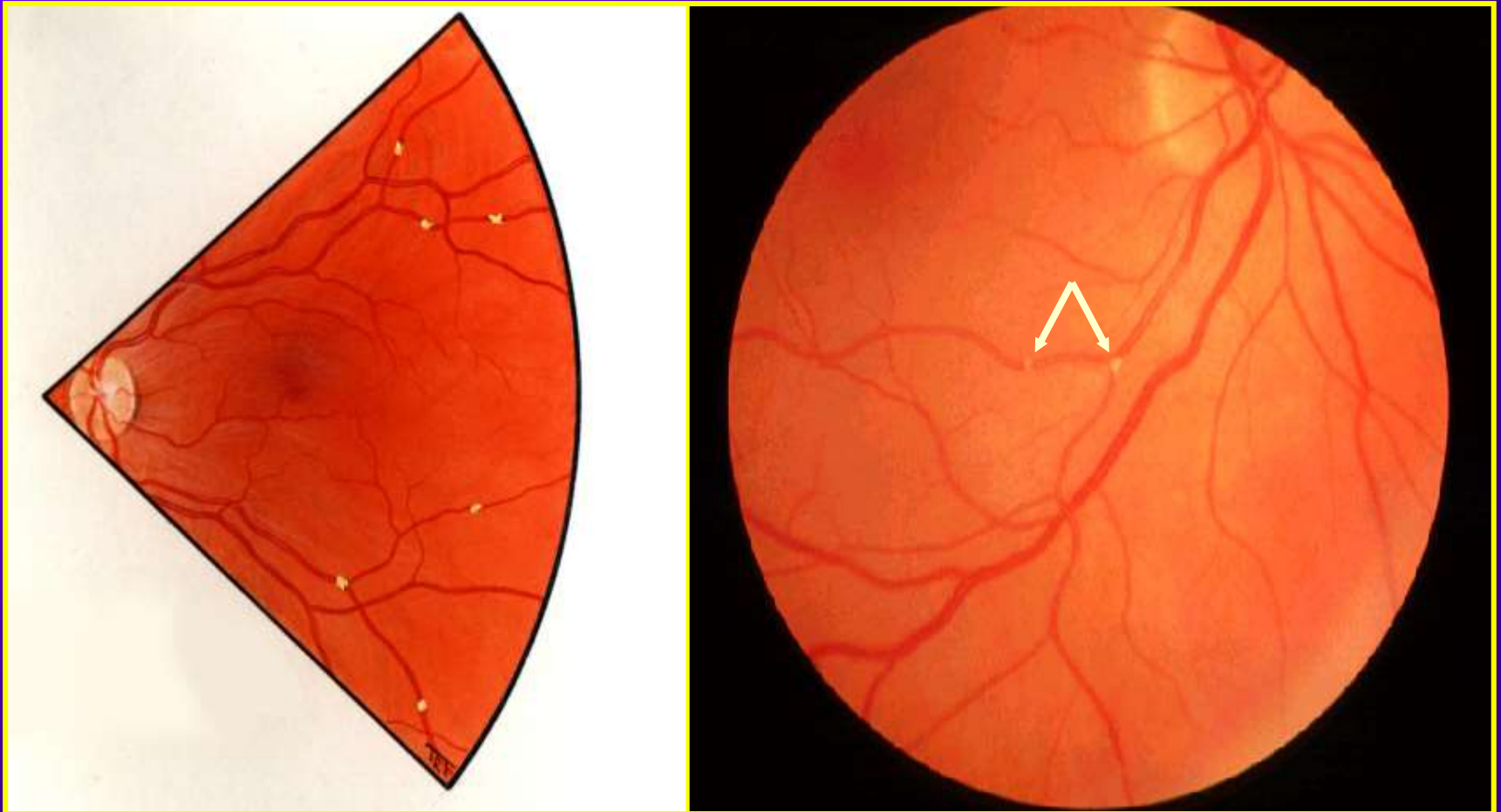
Embolism



Vaso-obliteration

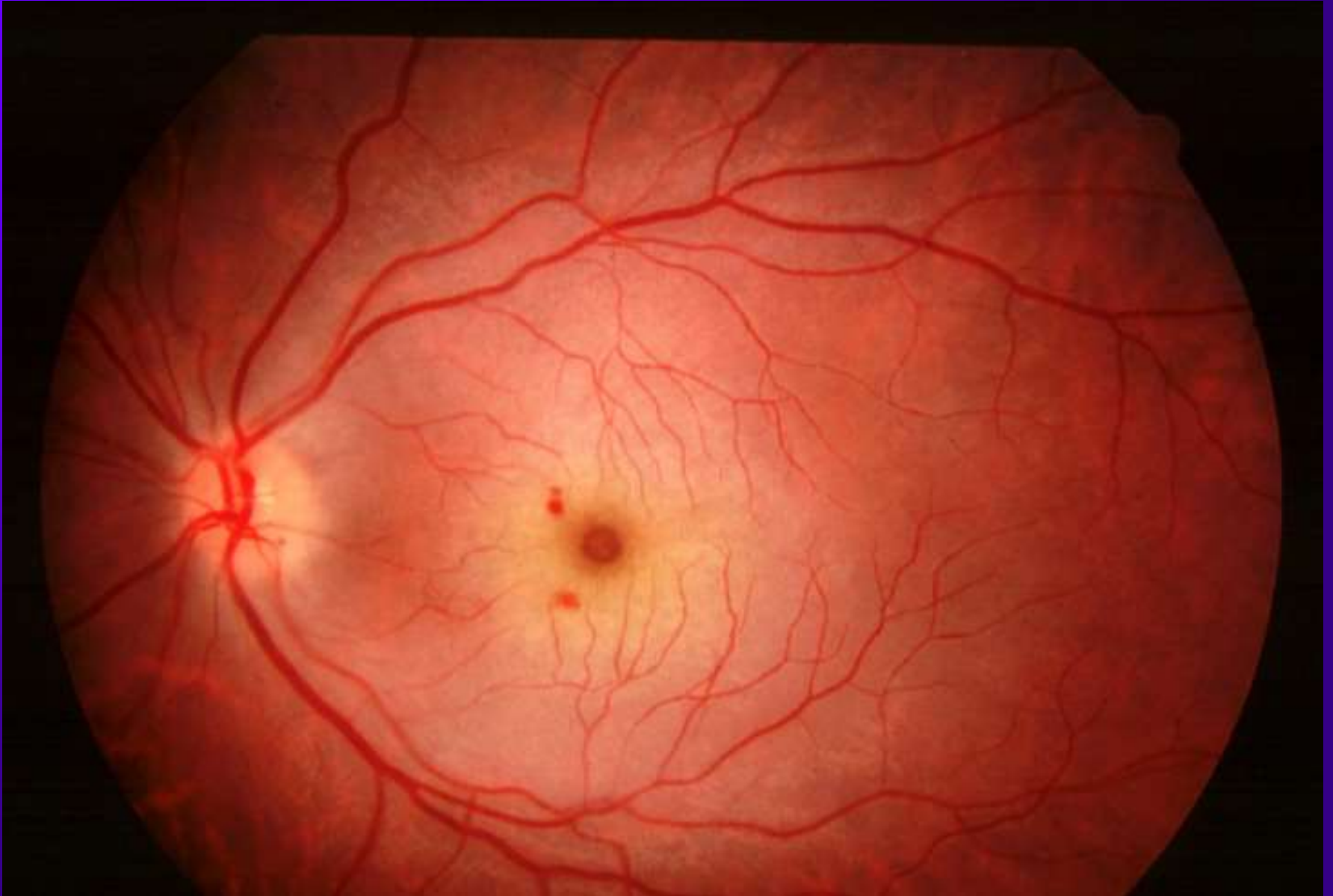


Cholesterol emboli (Hollenhorst plaques)



- Multiple, bright, refractile crystals
- Often located at arteriolar bifurcations
- Frequently asymptomatic

CENTRAL RETINAL ARTERY OCCLUSION



Central retinal vein occlusion (CRVO)



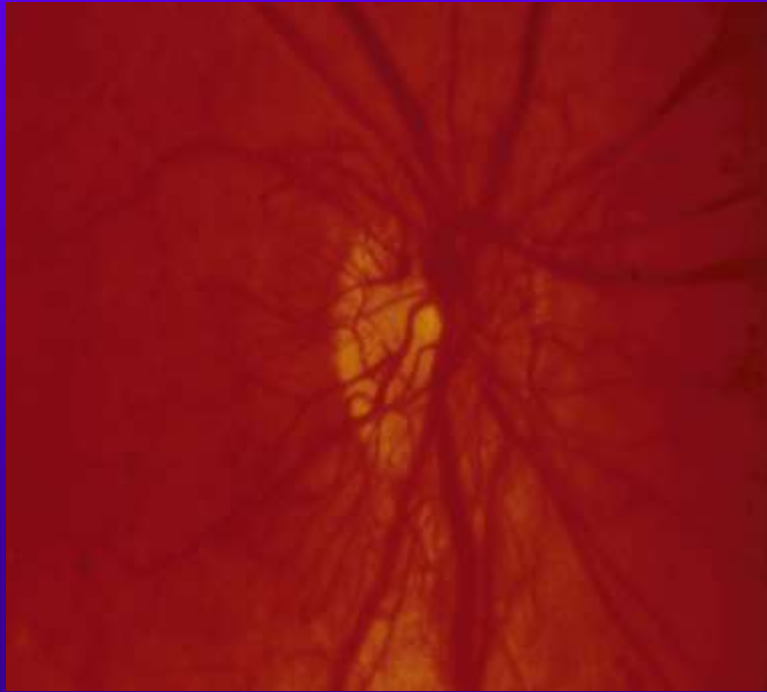
- **Mild venous tortuosity and dilatation**
- **Mild to moderate retinal haemorrhages**
- **Variable cotton-wool spots**
- **Mild to moderate disc oedema**
- **Chronic macular oedema**
- **Guarded prognosis**

Proliferative diabetic retinopathy

- Affects 5-10% of diabetics
- IDDM at increased risk (60% after 30 years)

Neovascularization

- Flat or elevated
- Severity determined by comparing with area of disc

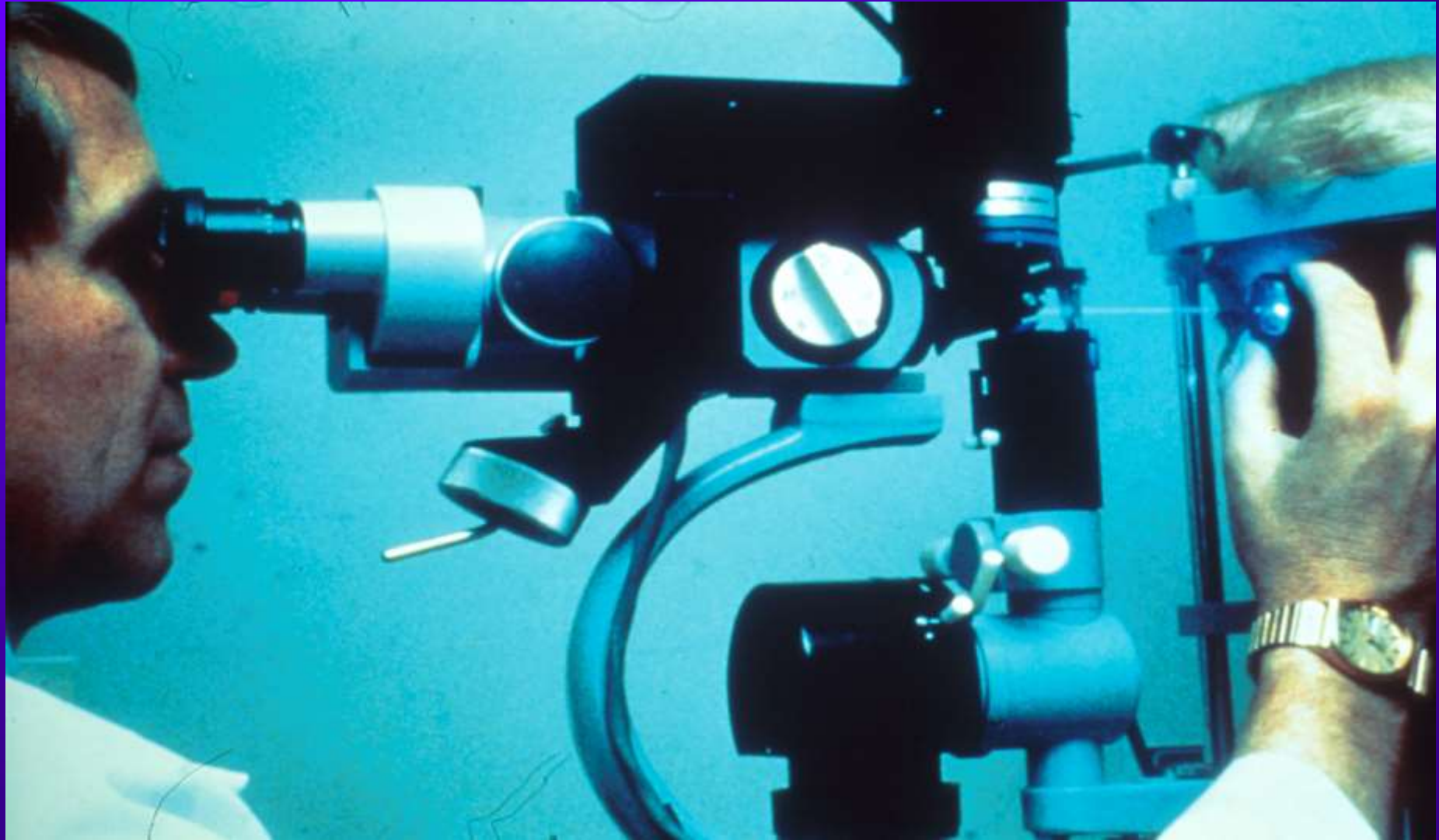


Neovascularization of disc = NVD

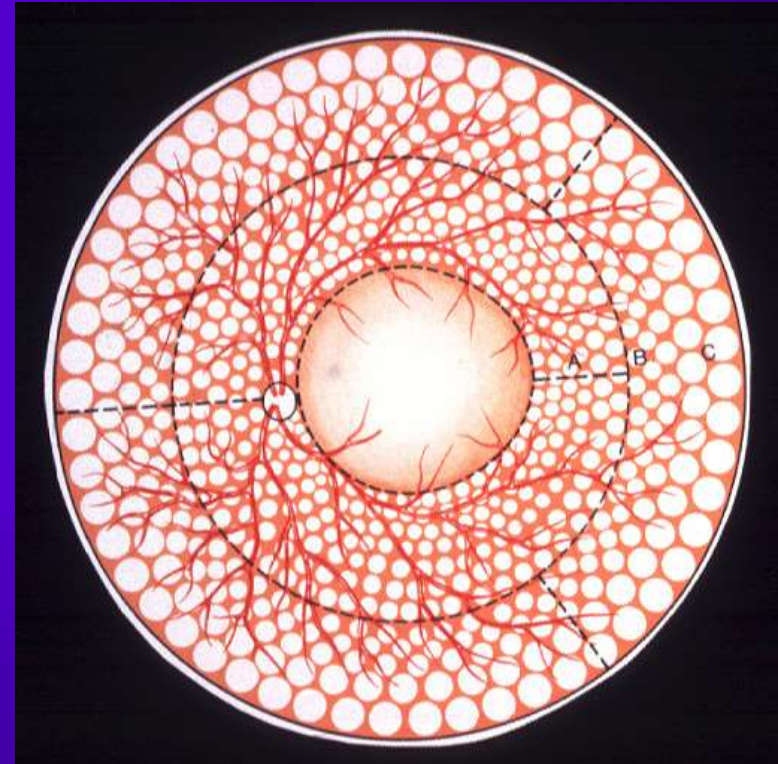
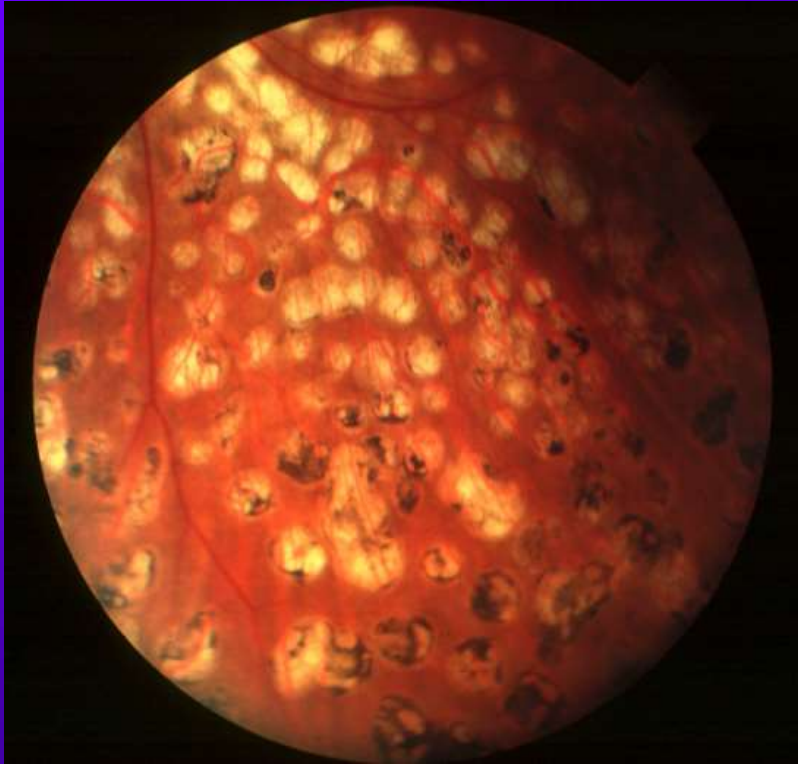


Neovascularization elsewhere = NVE

Laser Photocoagulation



Laser Panretinal Photocoagulation



- Initial treatment is 2000-3000 burns
- Spot size (200-500 μm)
- Gentle intensity burn (0.10-0.05 sec)

- Area covered by complete PRP
- Follow-up 4 to 8 weeks

ANGLE-CLOSURE GLAUCOMA (AACG)

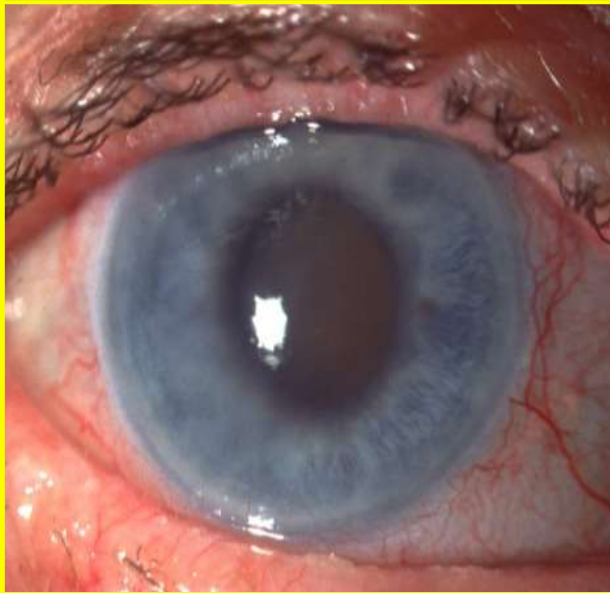
- Less common than open-angle glaucoma
- Sudden onset of symptoms
- Ocular emergency

ACUTE GLAUCOMA(AACG)

- Pupil mid-dilated
- Severe pain with nausea and vomiting
- Treatment:
 - Pilocarpine
 - Diamox and IV mannitol
 - Laser iridotomy

Acute Angle-Closure Glaucoma

Signs



- Severe corneal oedema
- Dilated, unreactive, vertically oval pupil

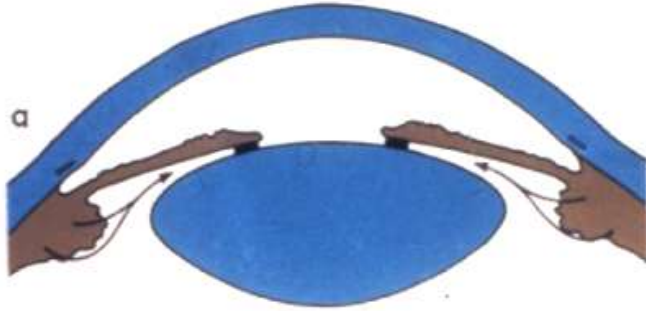


- Ciliary injection
- Shallow anterior chamber

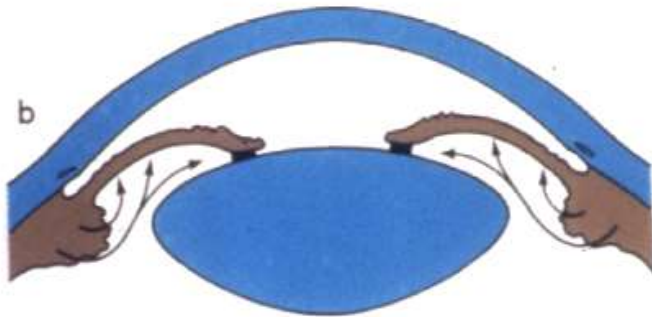


- Complete angle closure

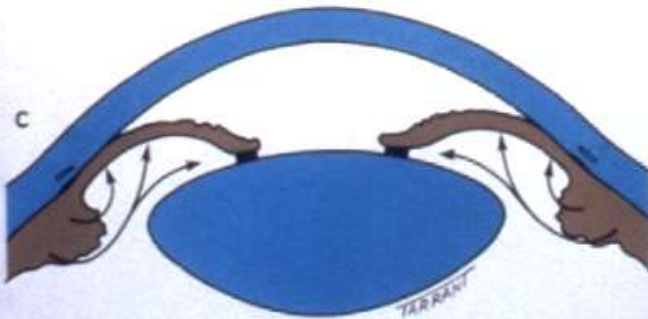
Pupil block



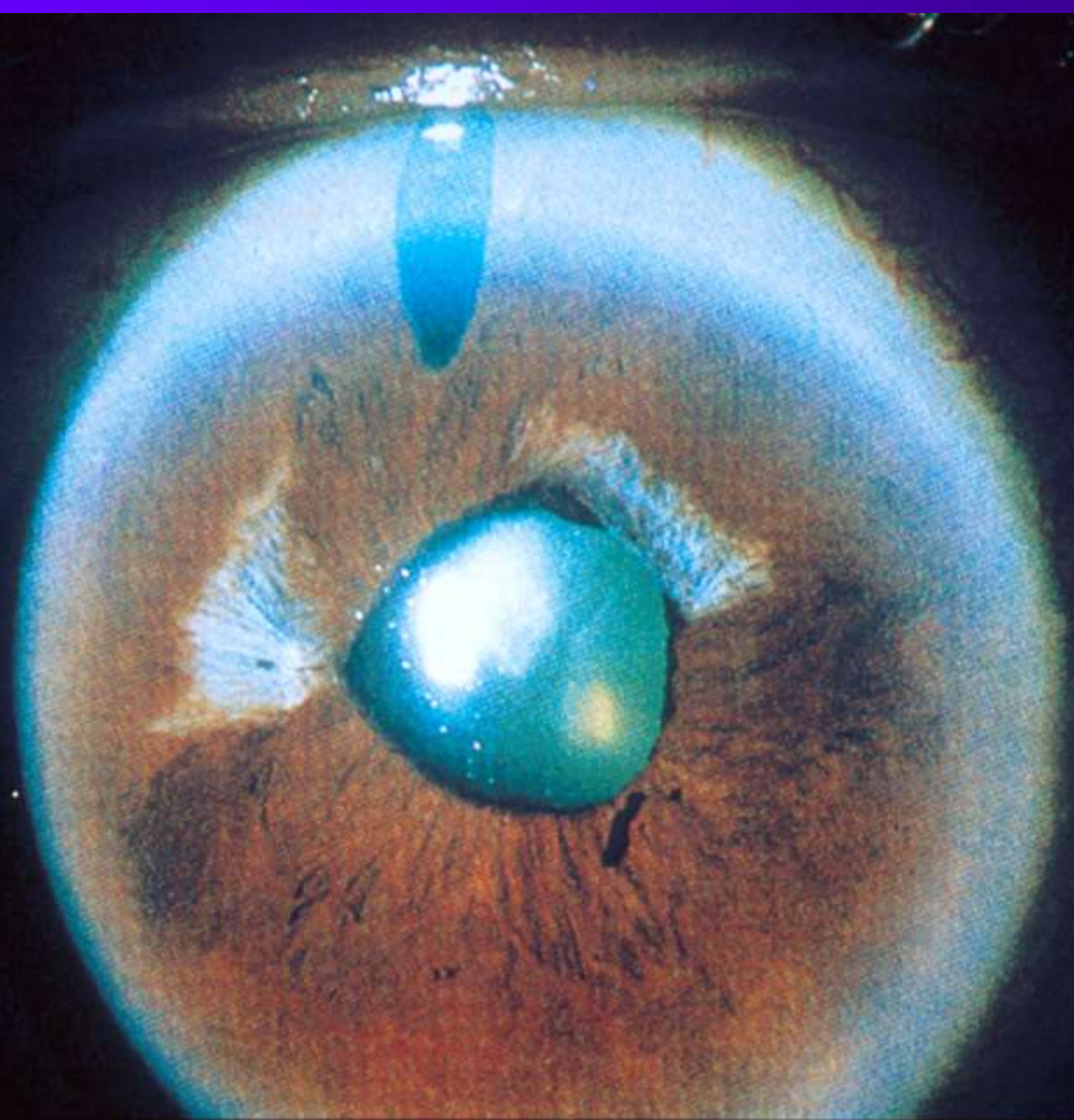
- Increase in physiological pupil block



- Dilatation of pupil renders peripheral iris more flaccid
- Increased pressure in posterior chamber causes iris bombe

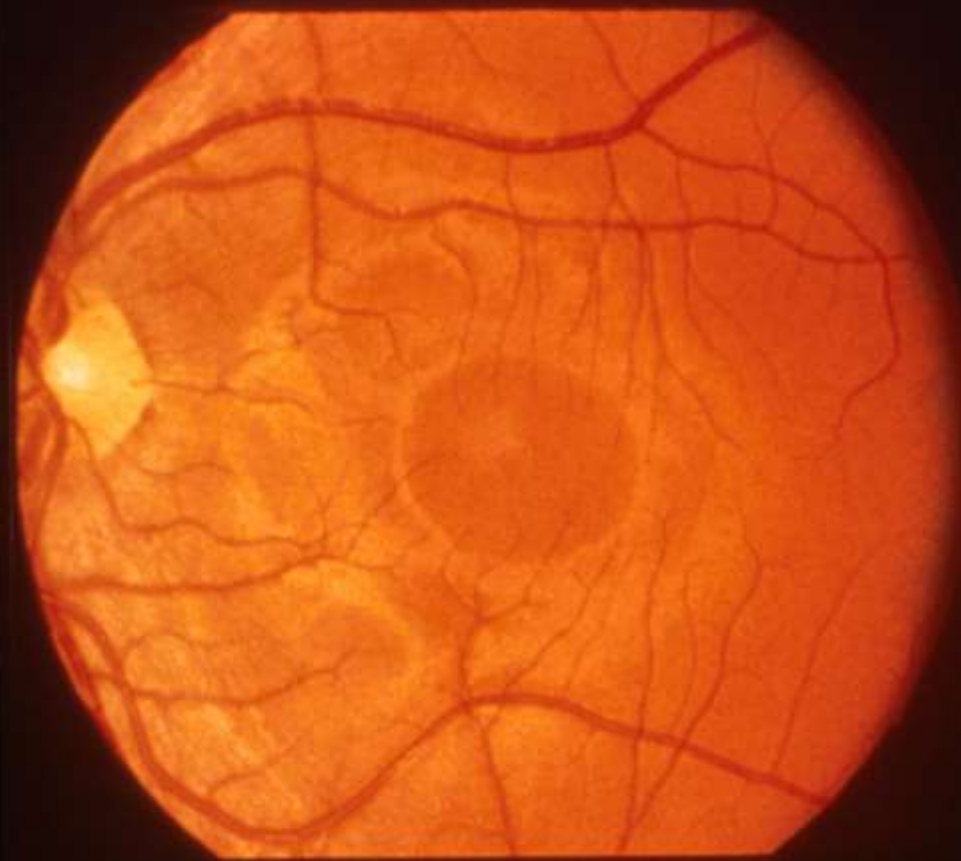


- Angle obstructed by peripheral iris and rise in IOP



AGE RELATED MACULAR DEGENERATION (ARMD)

- Most common cause of blindness is individuals greater than 65.



NORMAL



**MACULAR
DEGENERATION**

Choroidal neovascularization (CNV)

- Less common than atrophic AMD but more serious
- Metamorphopsia is initial symptom
- Most lesions are not visible clinically

Suspicious clinical signs



**Pinkish-yellow subretinal lesion
with fluid**

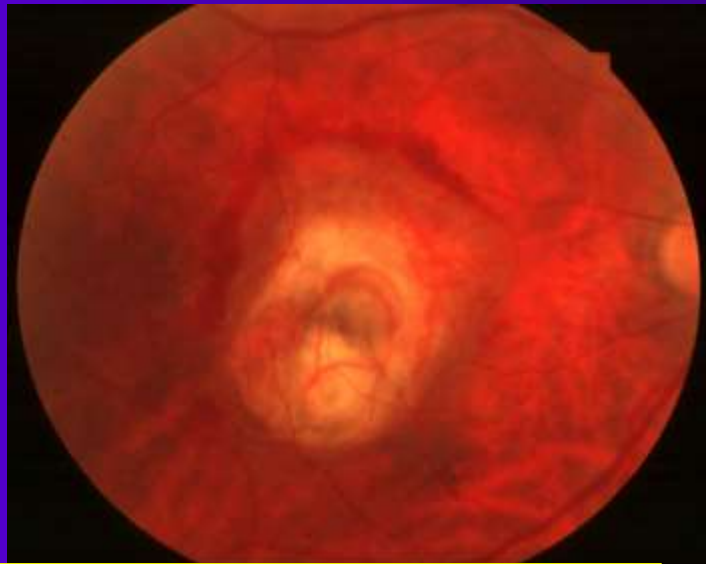


Subretinal blood or lipid

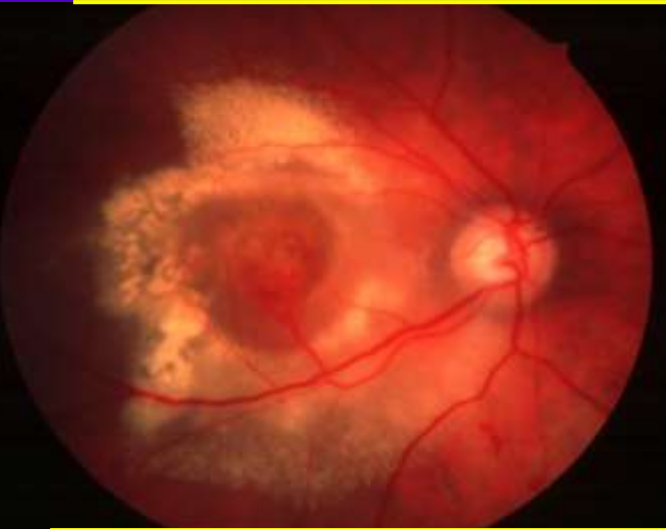
Possible subsequent course of CNV



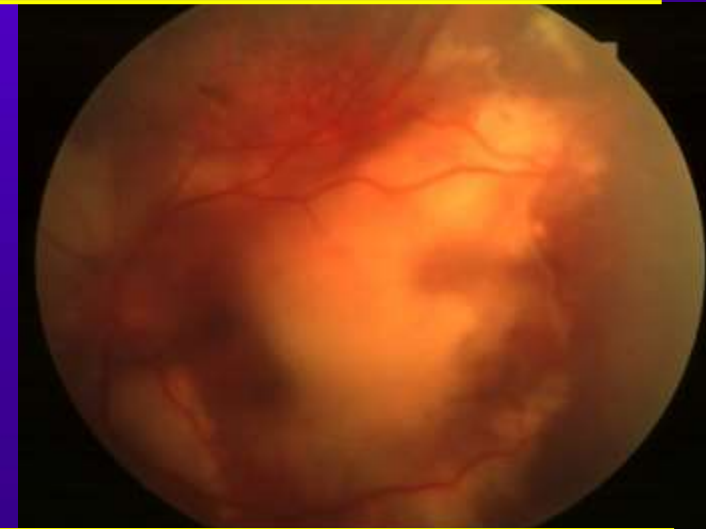
**Haemorrhagic sensory
RPE detachment**



Subretinal (disciform) scarring



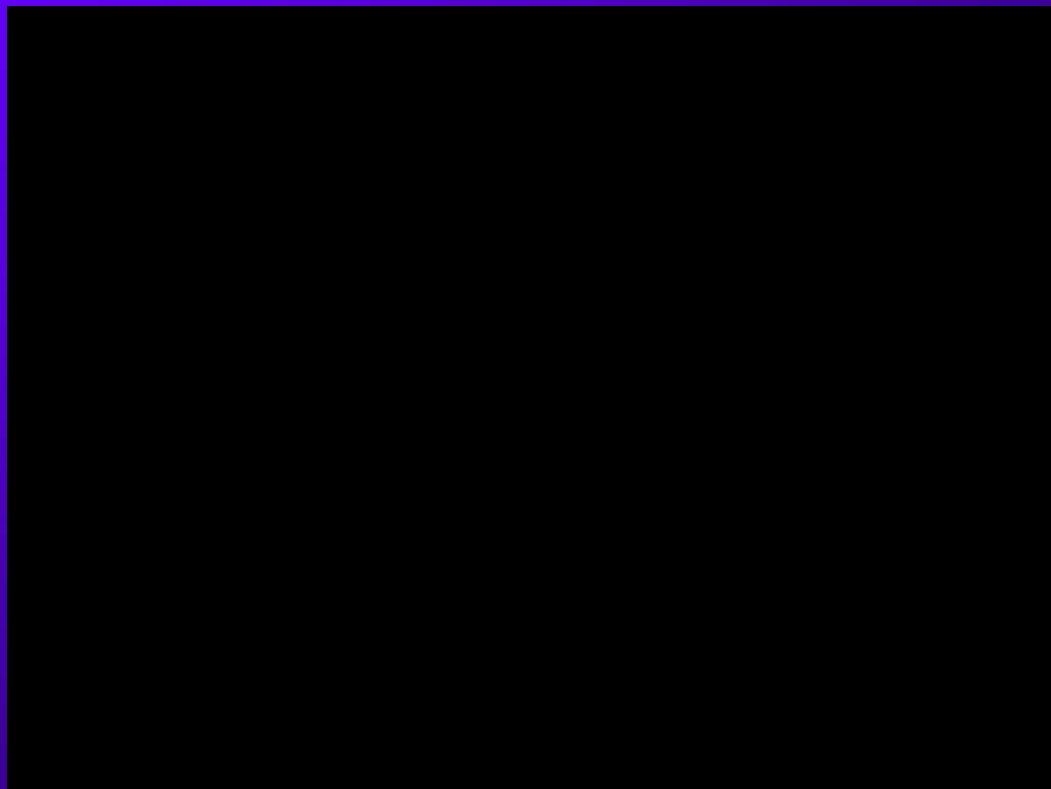
Massive subretinal exudation



Exudative retinal detachment

Anti-Vegf Injections





Thank You

