

Diabetic Retinopathy

 A frequent cause of blindness in patients aged 20 – 64 years

 Diabetic retinopathy is rarely found in children younger than 10 years of age

Non proliferative diabetic retinopathy

- ✓ **Microaneurysm**
- ✓ **Dot and Blot intraretinal hemorrhage**
- ✓ **Retinal edema**
- ✓ **Hard exudate**
- ✓ **Dilation of retinal veins**
- ✓ **Intraretinal microvascular abnormalities**
- ✓ **Cotton wool spots**

Proliferative diabetic retinopathy

- ✓ Fine new vessels
- ✓ New vessels and fibrous component
- ✓ Vit - Hemorrhage

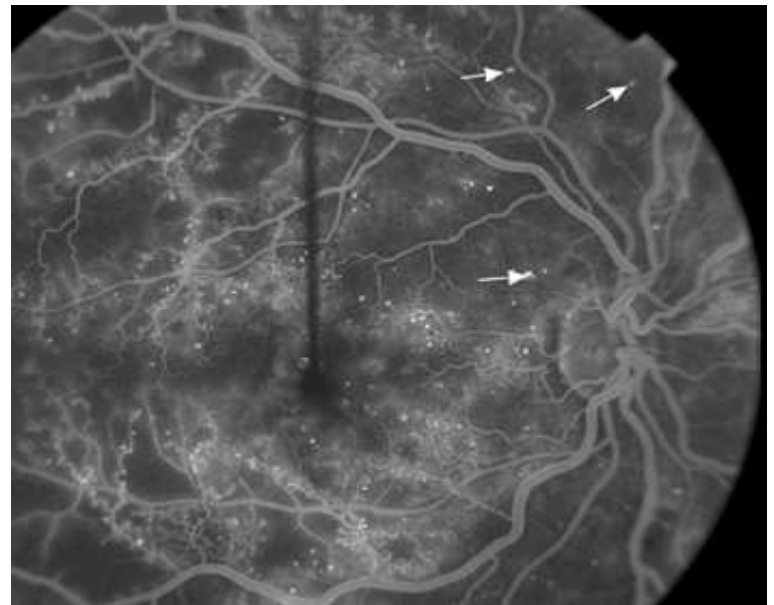
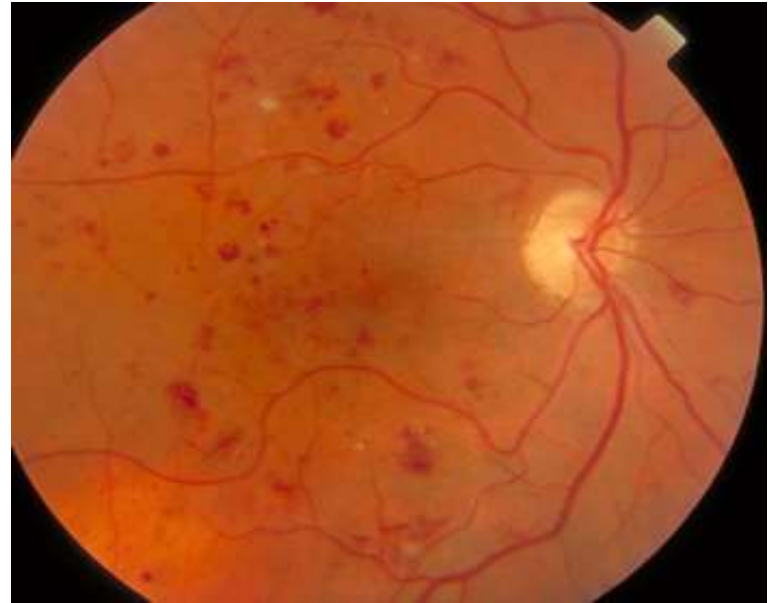
FIGURE 12.9 Ophthalmic Complications of Diabetes Mellitus

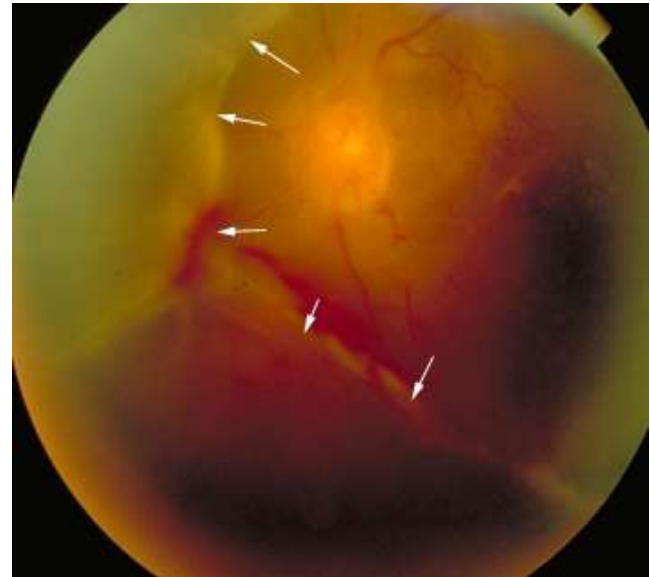
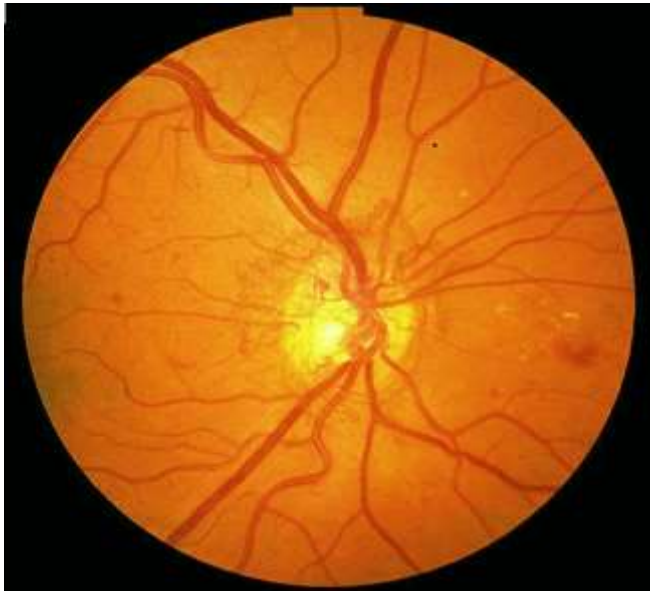
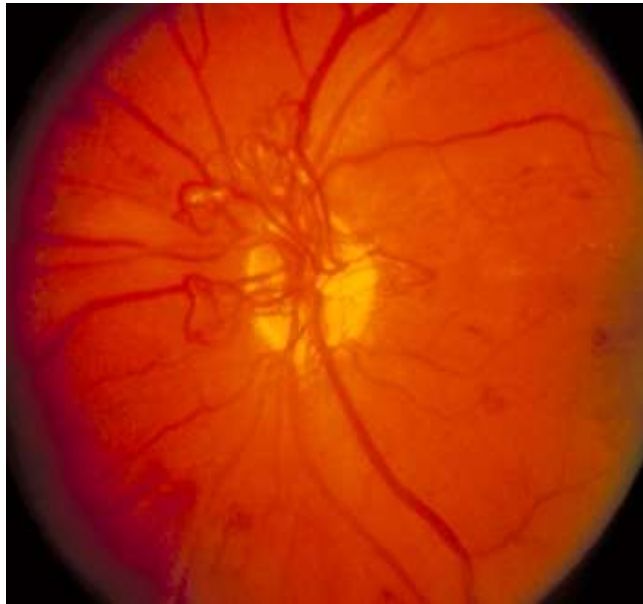
Corneal abnormalities
Glaucoma
Iris neovascularization

Cataracts
Optic nerve abnormalities
Diabetic retinopathy

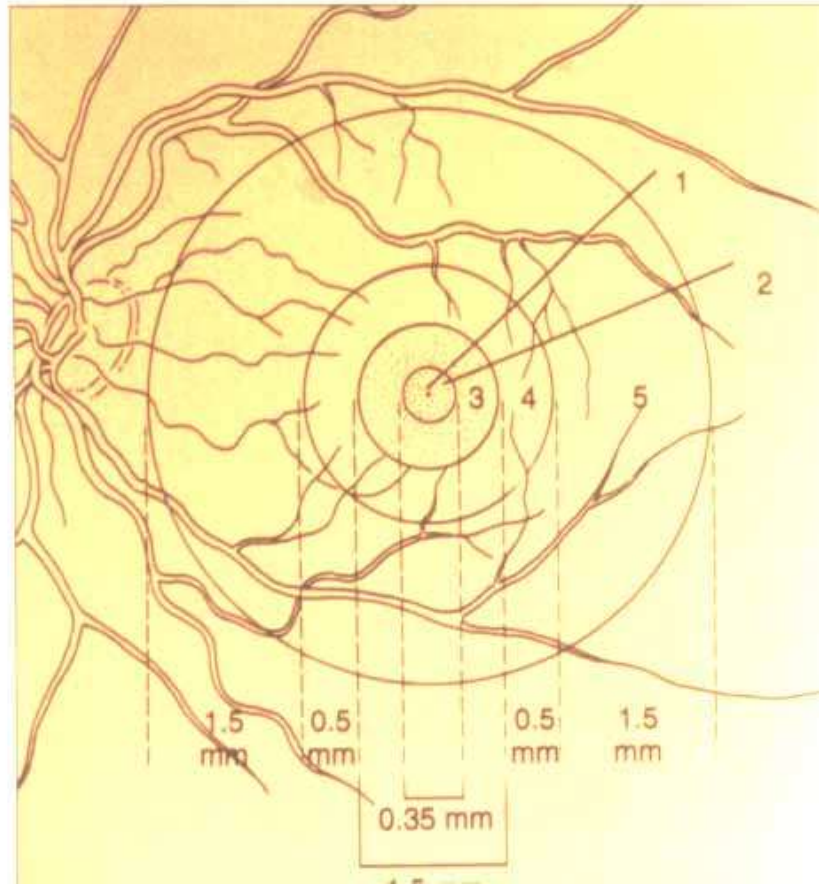
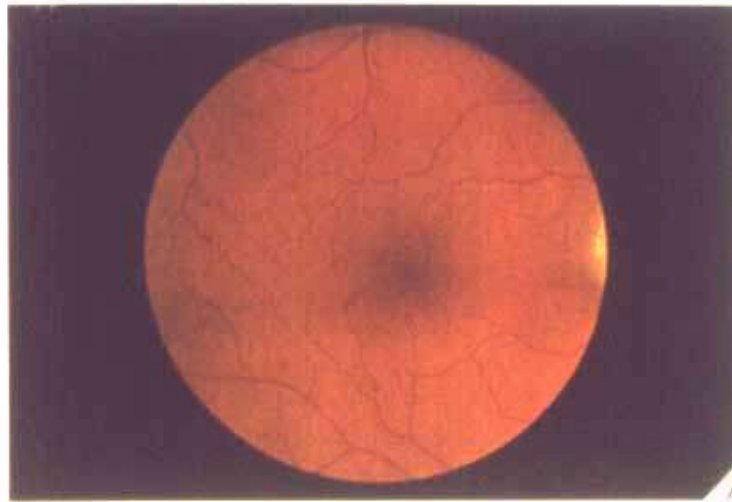
FIGURE 12.10 Prevalence of Diabetic Retinopathy

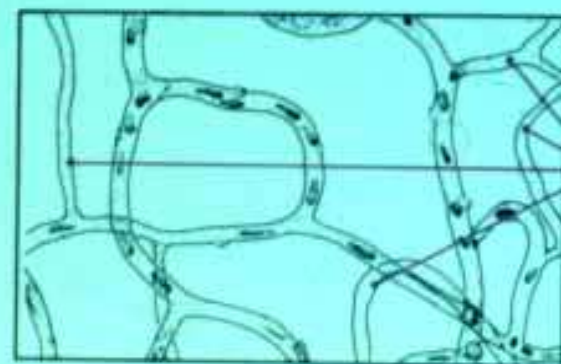
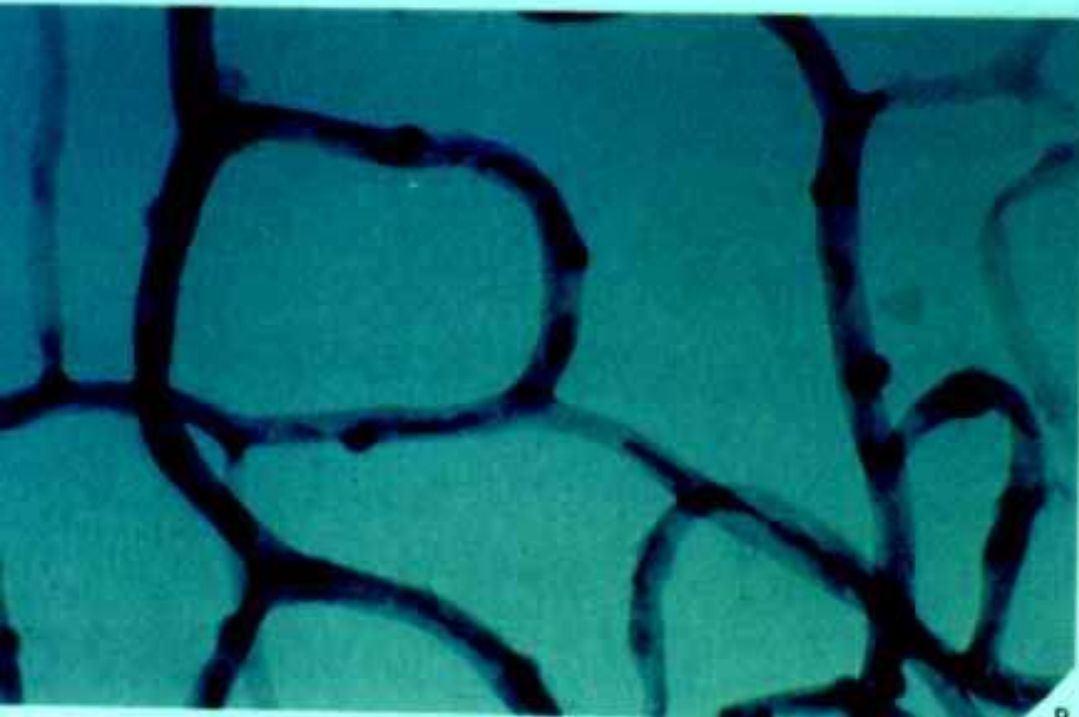
25% of total diabetic population have diabetic retinopathy
Over 90% of all diabetics will acquire retinopathy at some point during their lifetime





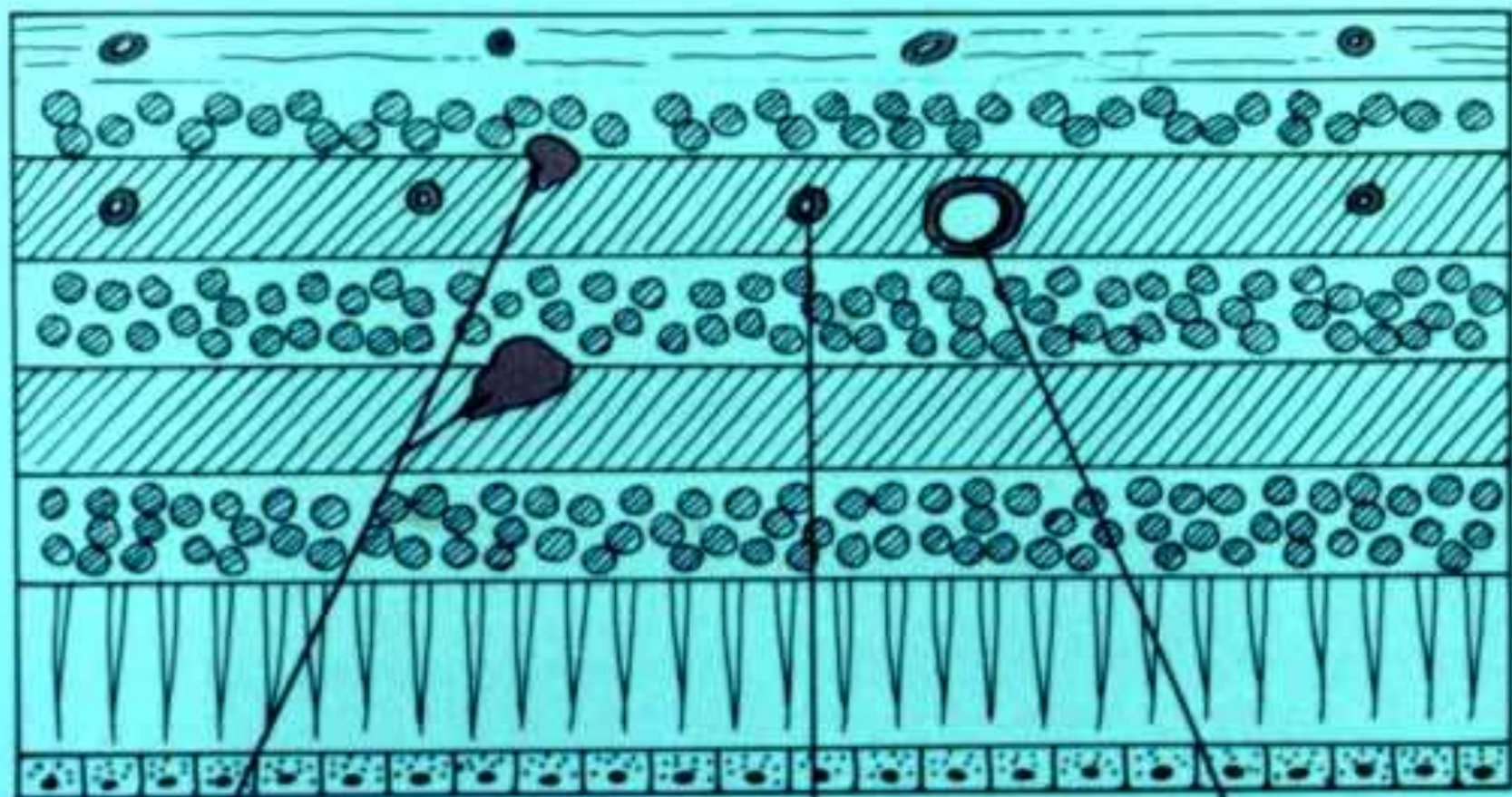
2.9 | A. H.
macular
fovea (30





Nonviable capillaries

Early BDR



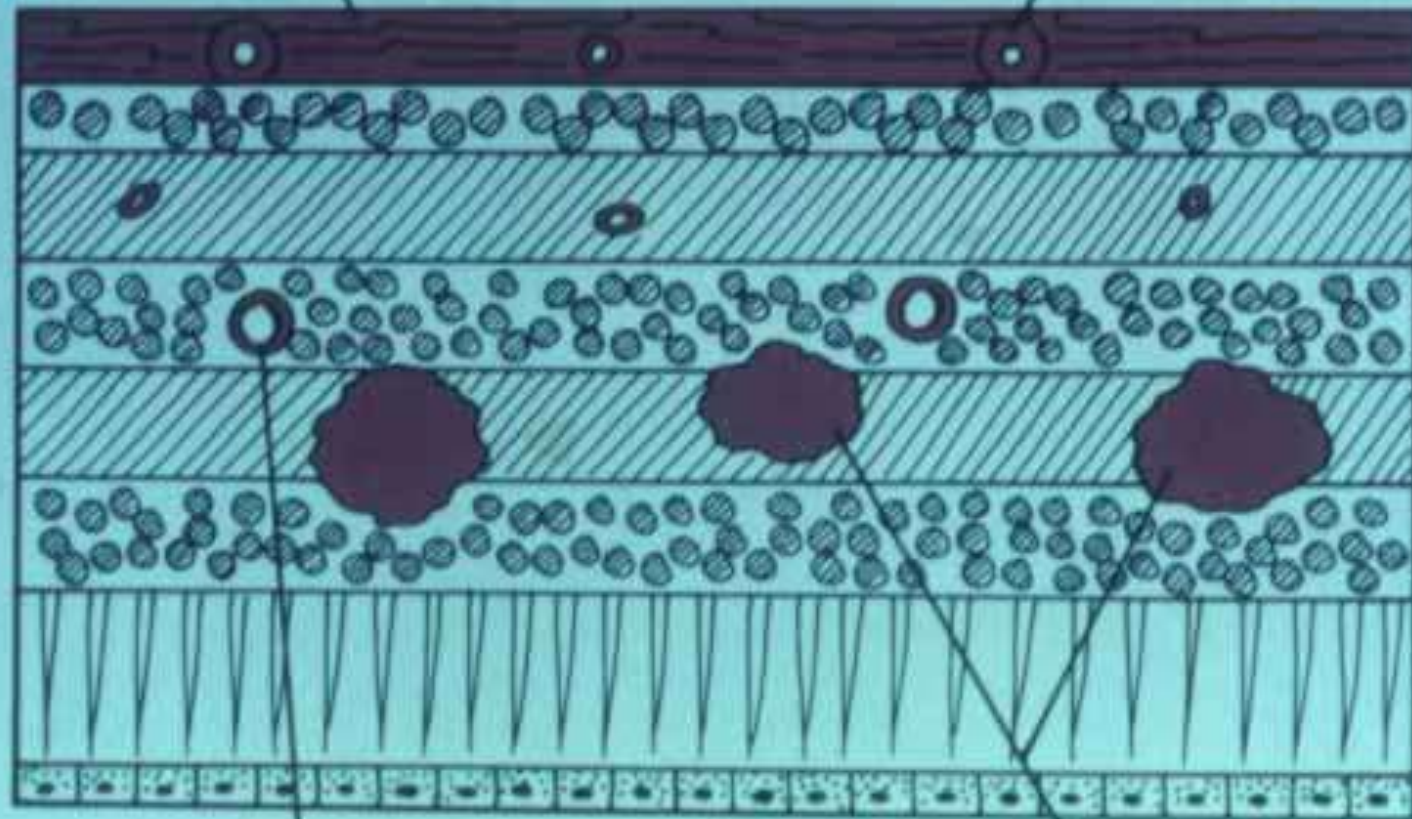
Hemorrhages

Normal
capillary

Microaneurysm

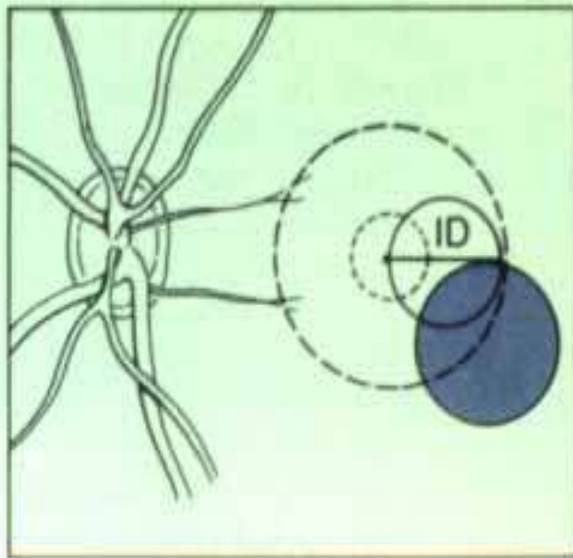
Superficial flame
hemorrhage

Atherosclerotic
arteriole

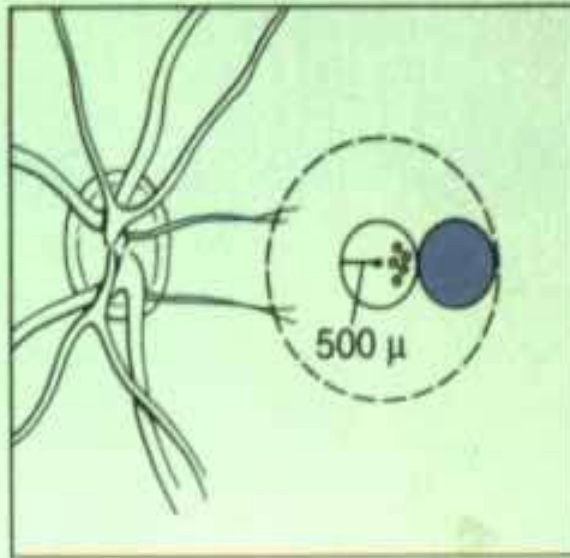


Microaneurysm

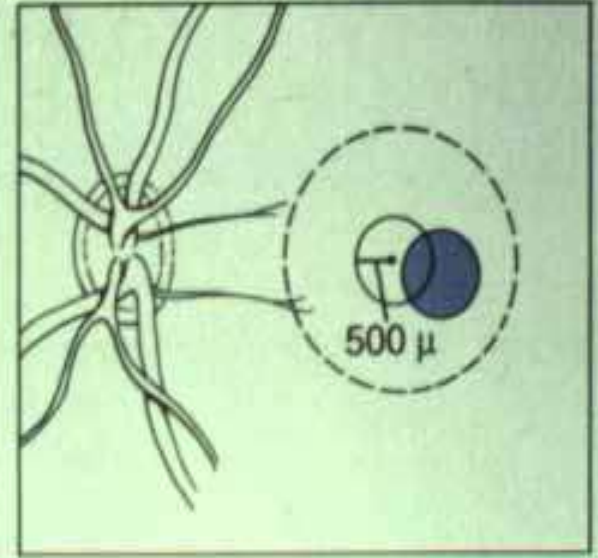
Dot and blot
hemorrhages



A. One disc area thickening within 1 disc diameter of center of fovea



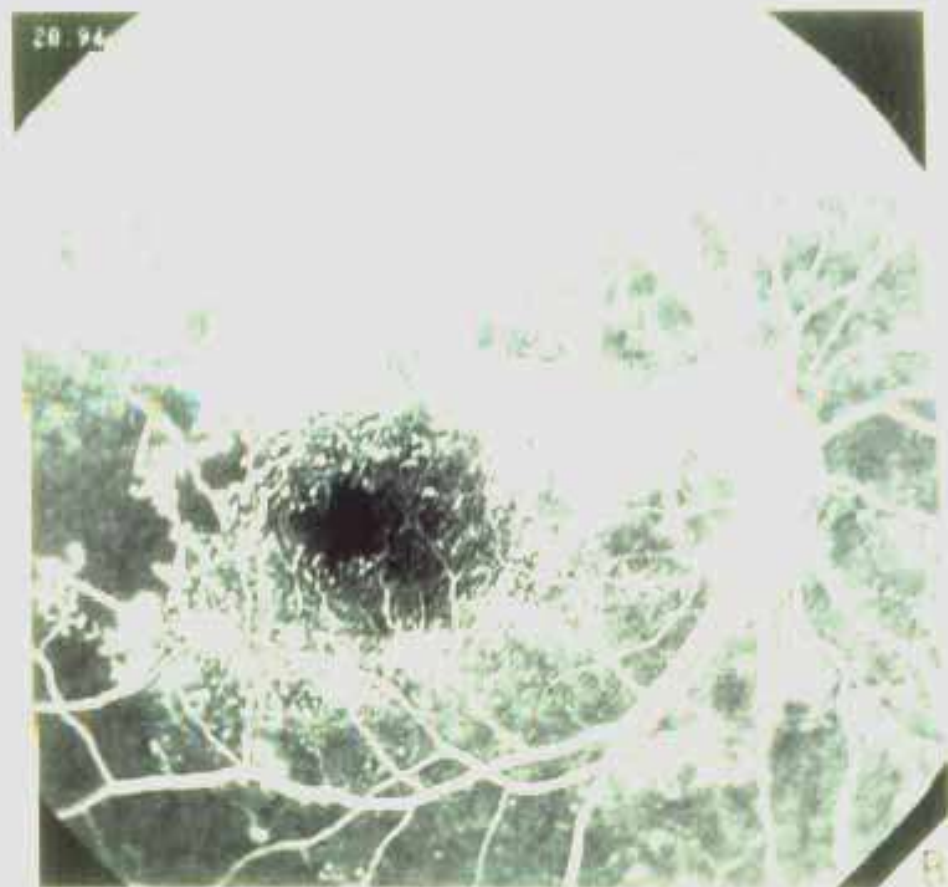
B. Hard exudate within 500 μ of center of fovea with associated thickening



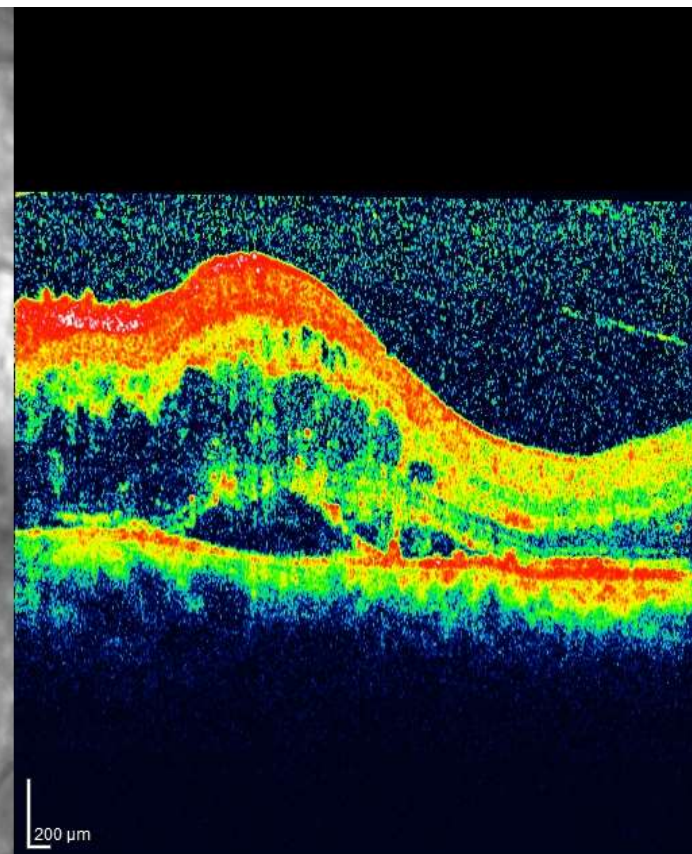
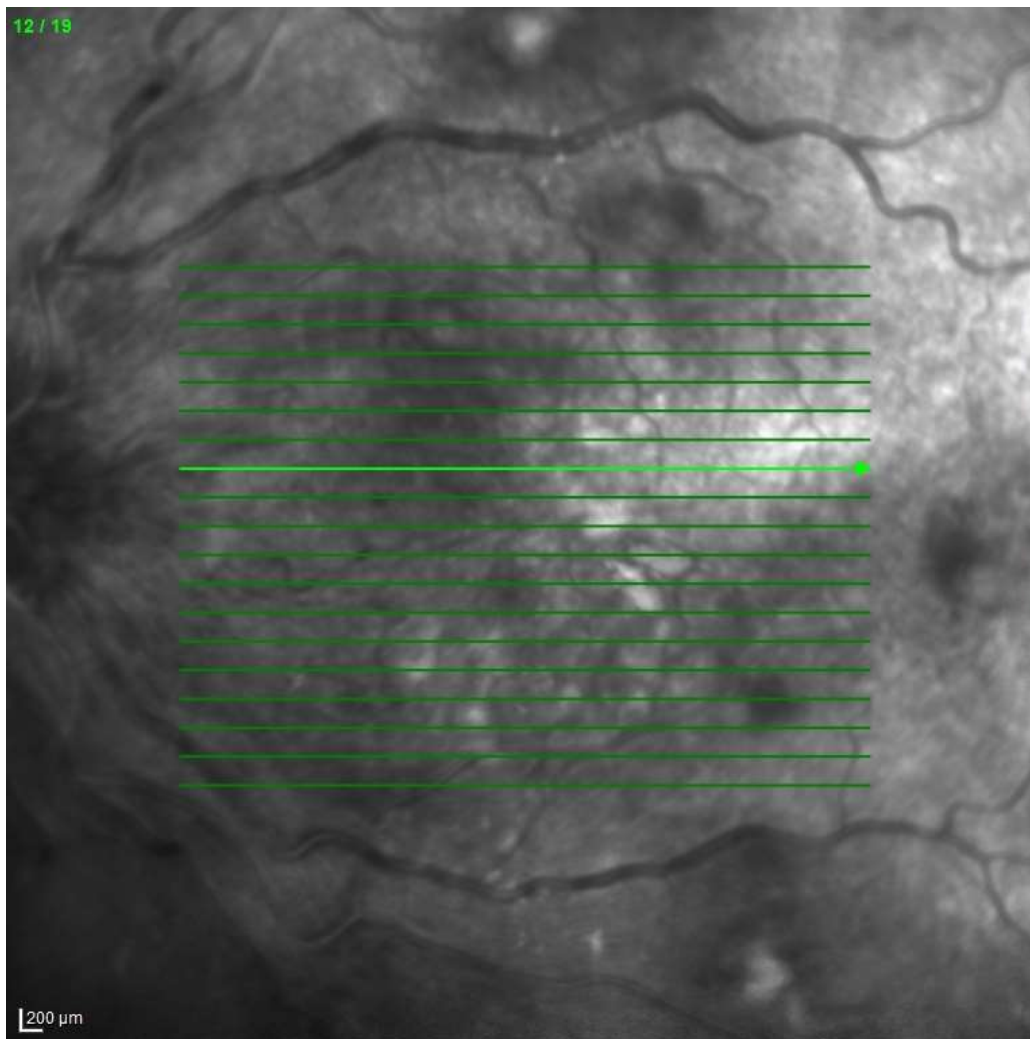
C. Retinal thickening within 500 μ of center of fovea

12.20 | Clinically significant macular edema (CSME) which qualified for focal laser treatment in the early treatment diabetic retinopathy study (ETDRS). A: 1 disc area of macular edema within 1 disc diameter of center of foveal avascular zone. B: Hard exudate within 500 μ m of center of foveal avascular zone with associated edema. C: Macular edema within 500 μ m of center of foveal

avascular zone. Treatment of patients in the ETDRS reduced 3-year, 2-line loss of visual acuity from 30% to 15%. Poor prognosis is more likely in patients with diffuse edema, macular capillary nonperfusion, cystoid macular edema, and hard exudate in the fovea, and poor initial visual acuity (< 20/200).

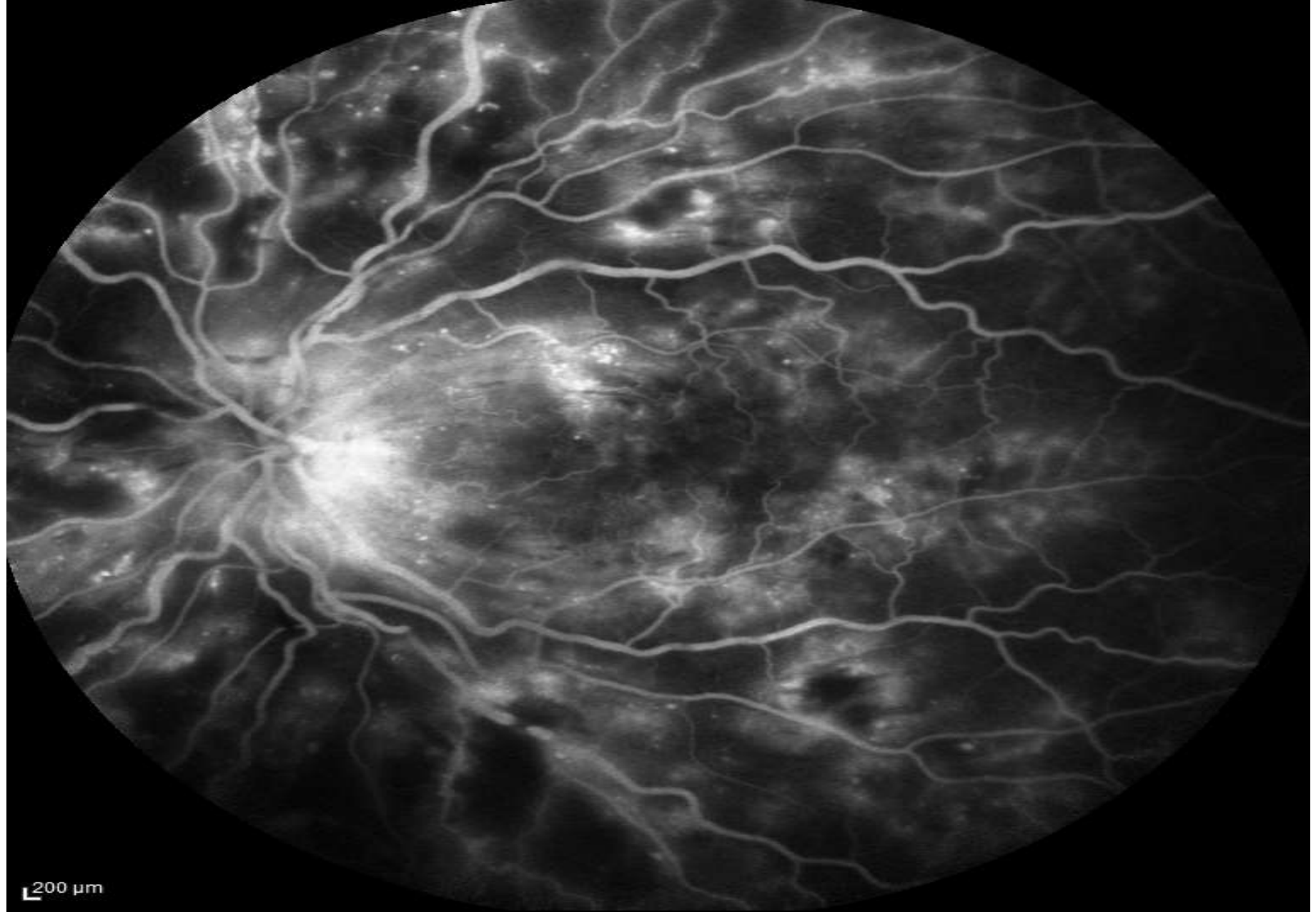


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5/10/2016, OS

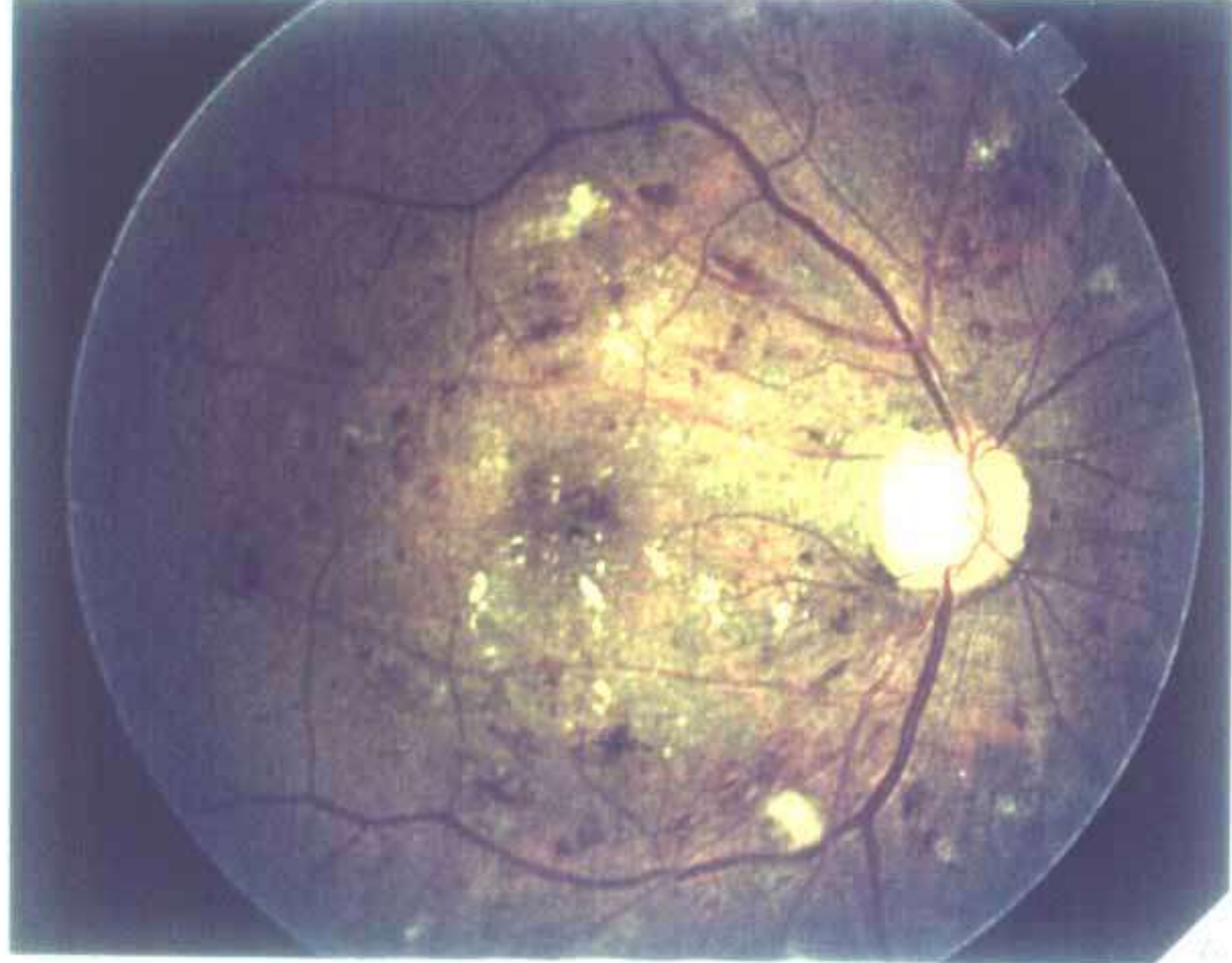
IR&OCT 30° ART [HS] ART(9) Q: 17



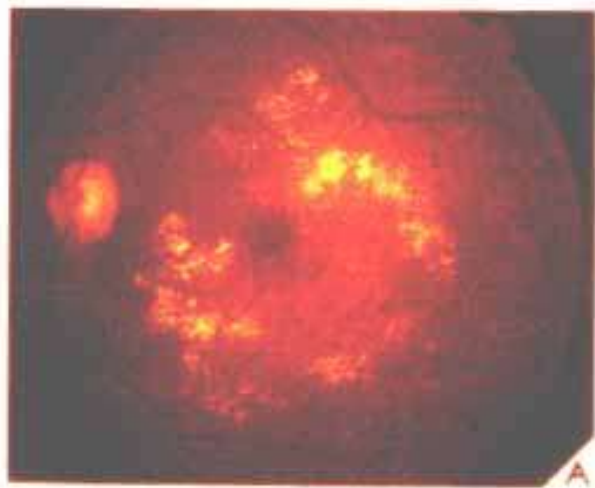
200 μ m

5/10/2016, OS

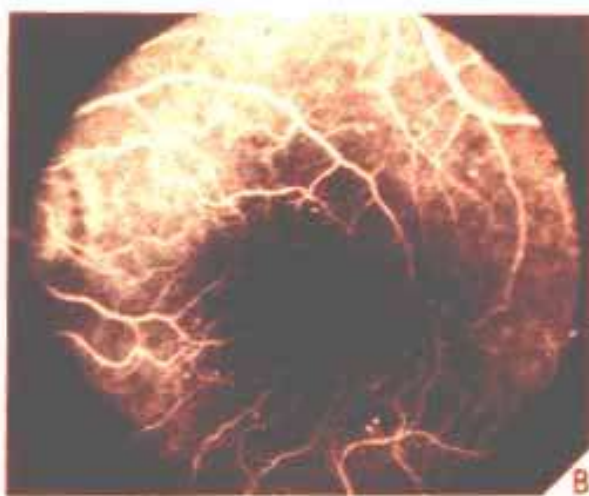
FA 4:12.06 55° ART(9)



SYSTEMIC DISEASES



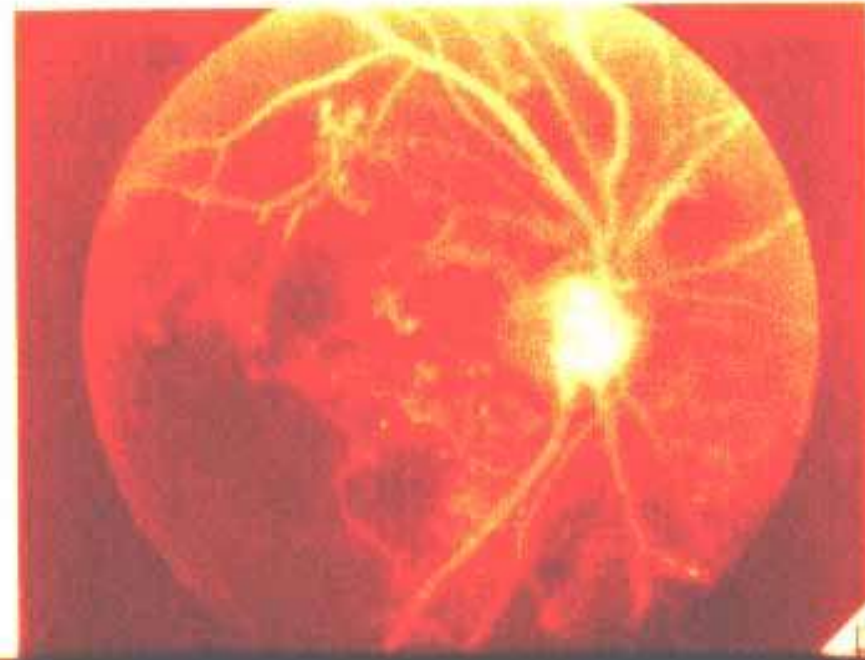
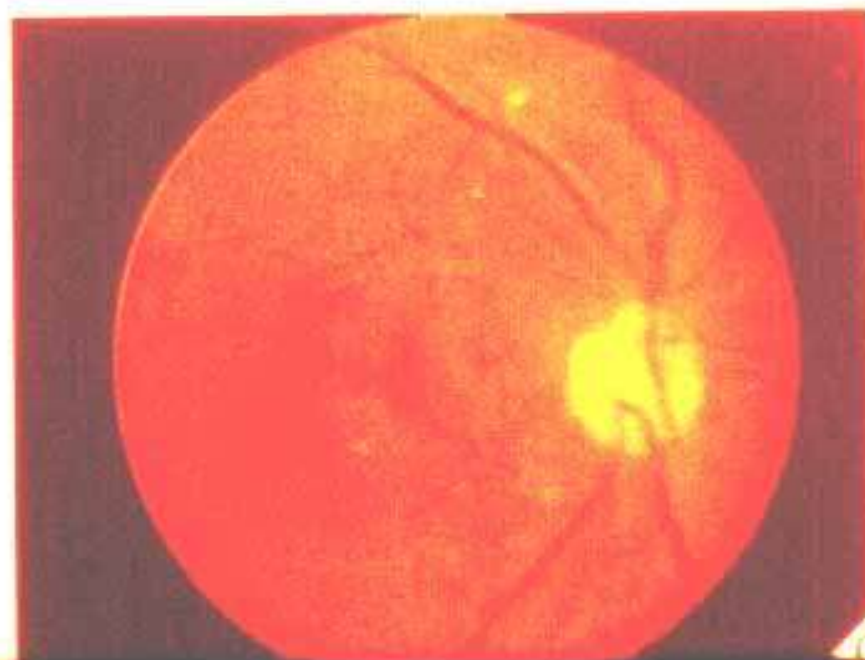
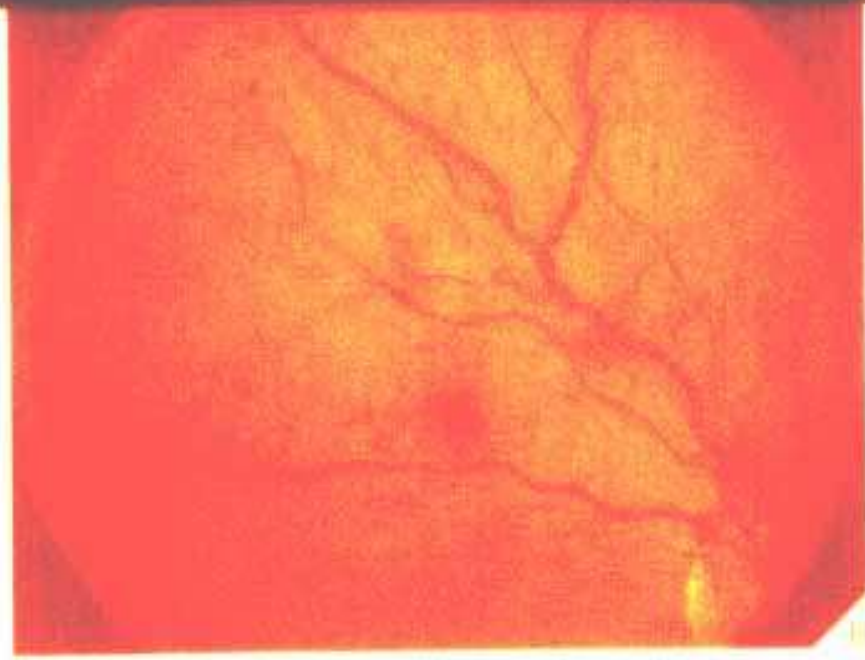
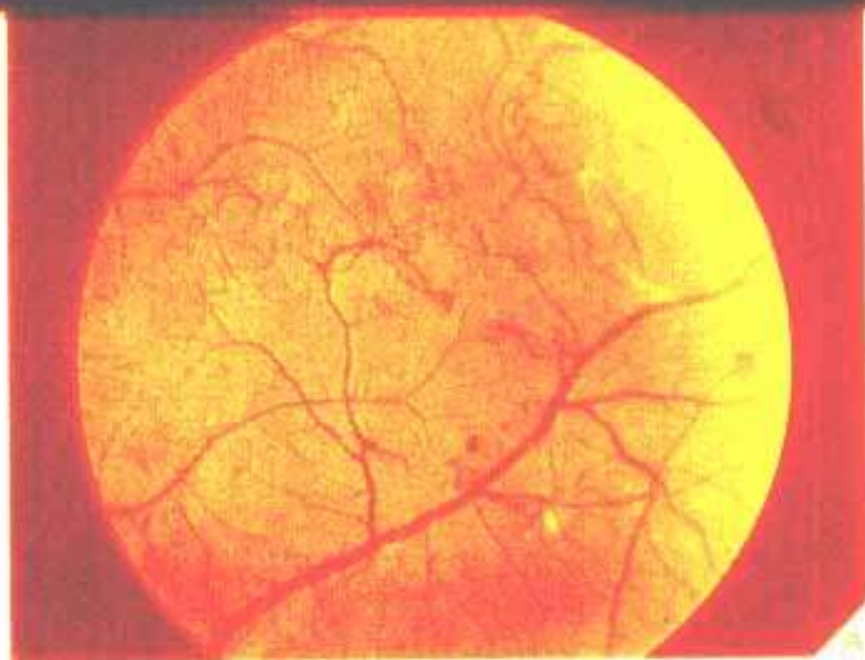
A

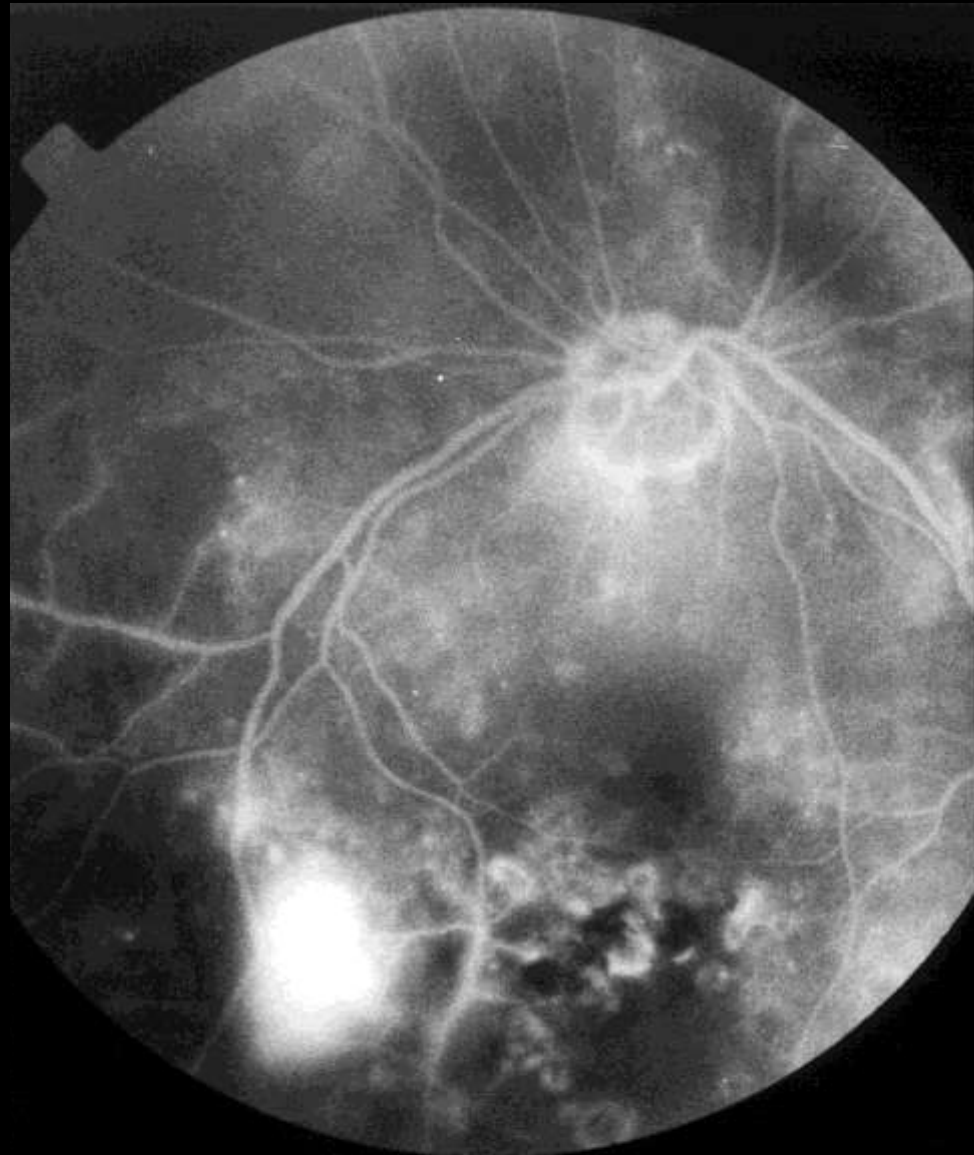


B

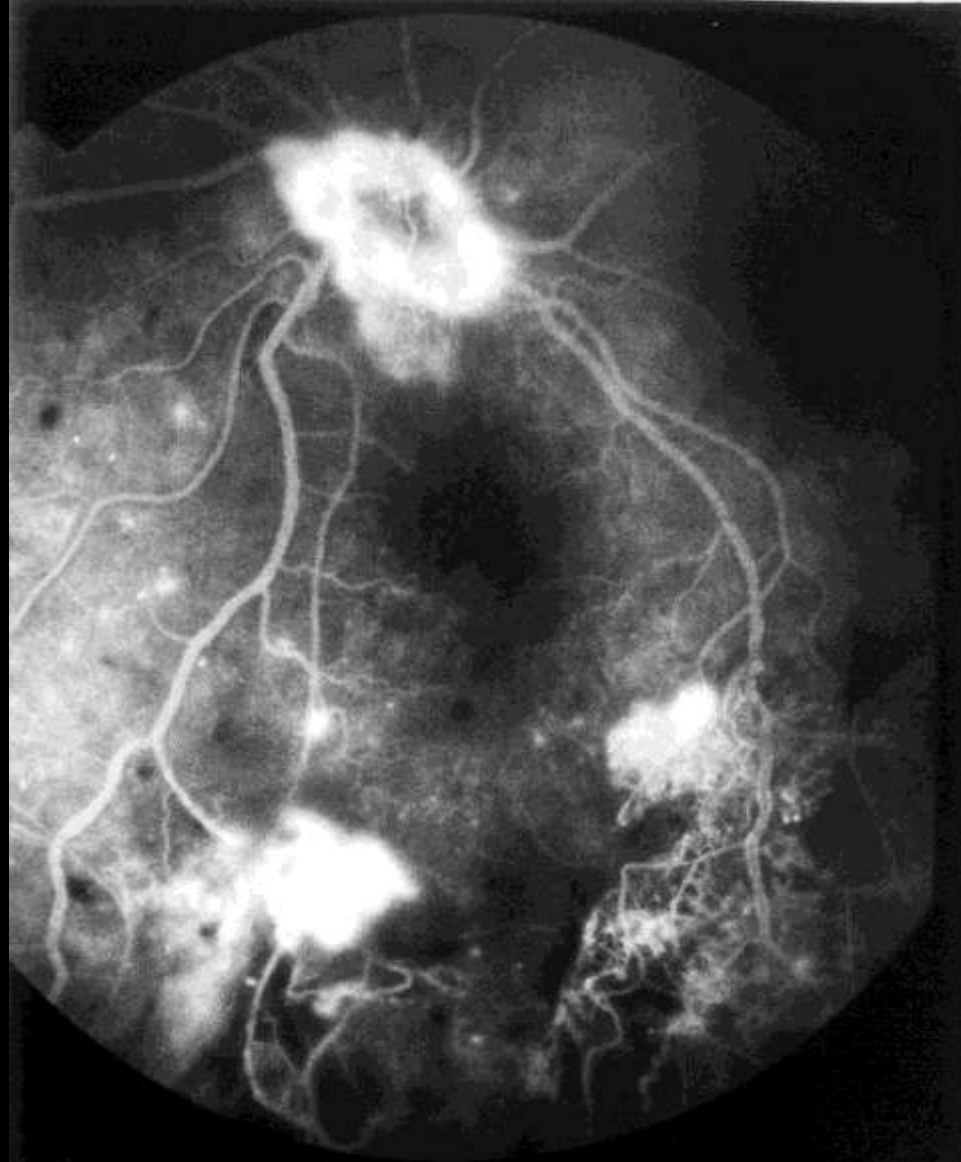


C

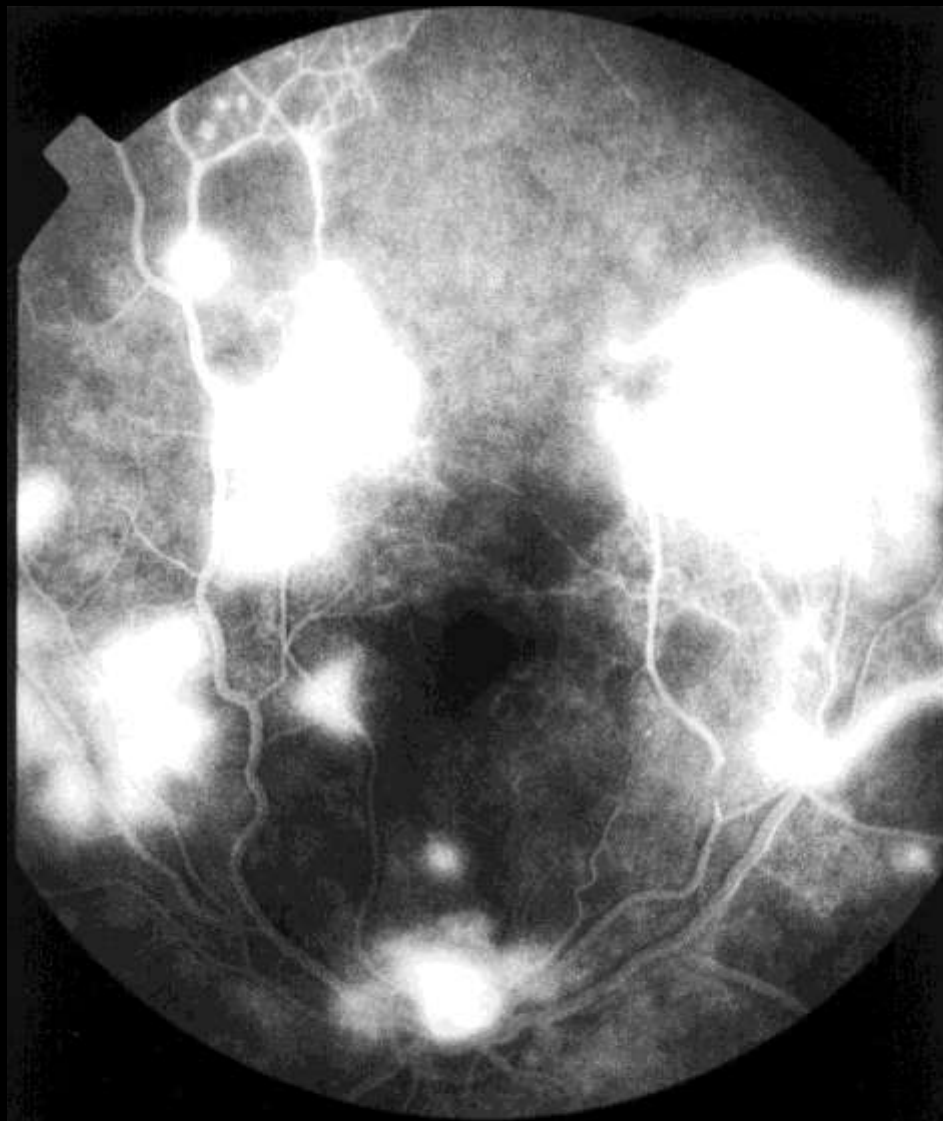




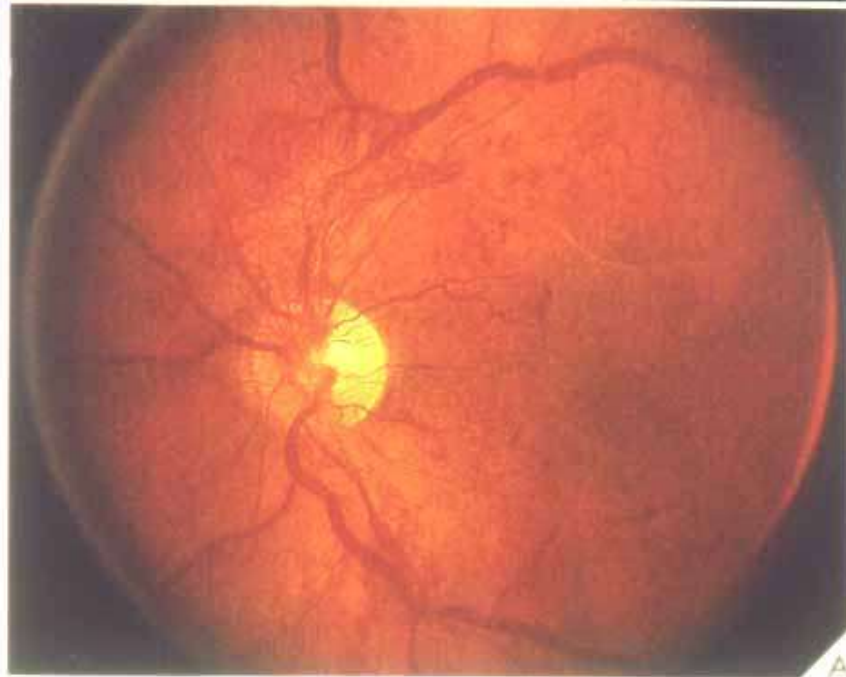
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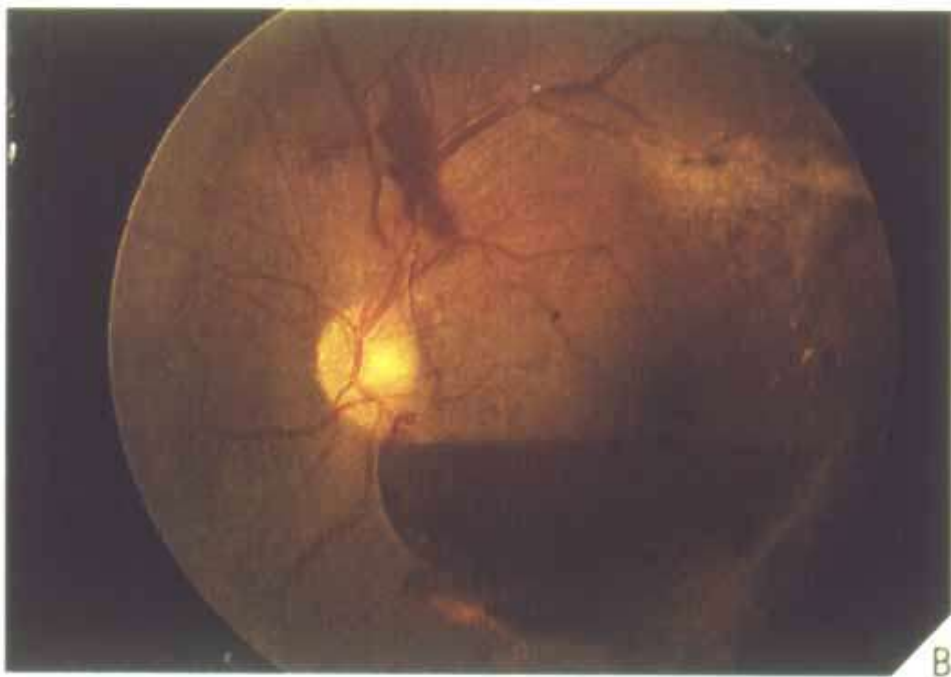
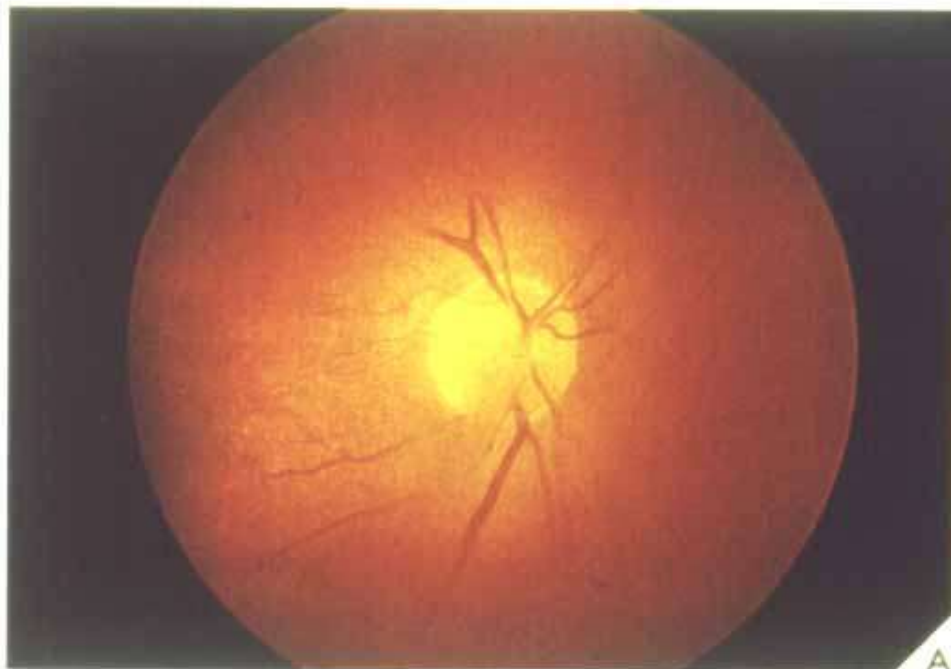


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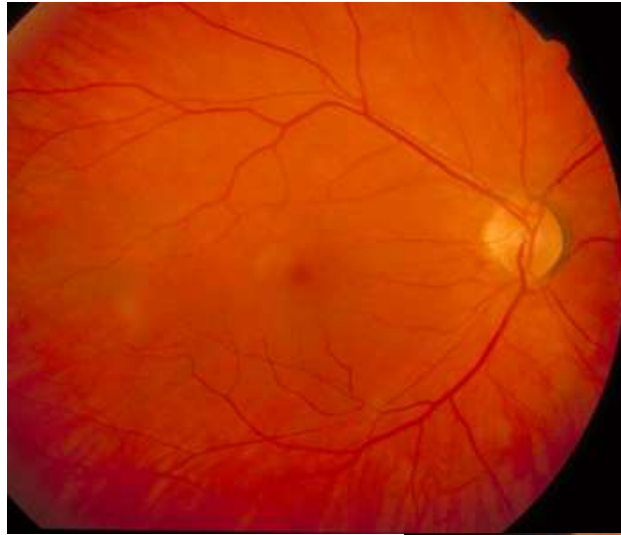


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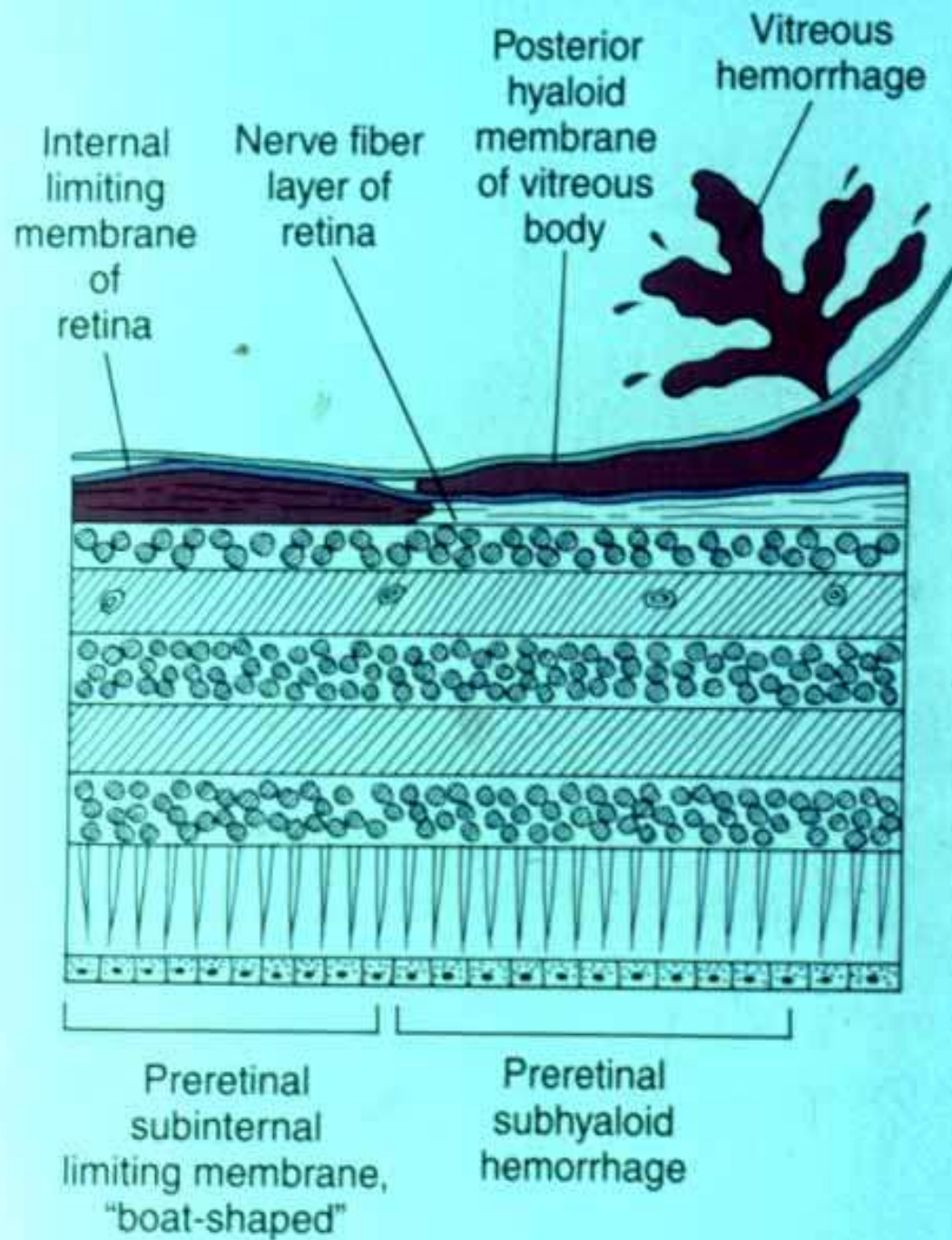


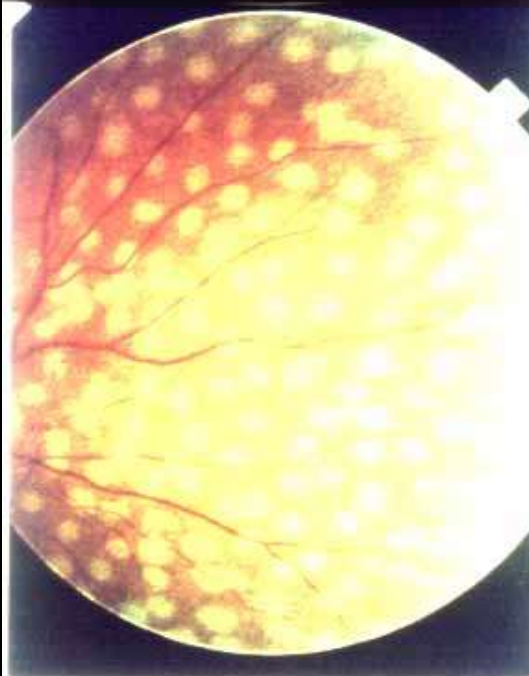
Hypertensive retinopathy



Harmful effects of systemic conditions on DR

- Hypertension
- Elevated serum lipids
- Carotid occlusive disease
- Renal diseases
- Anemia
- pregnancy





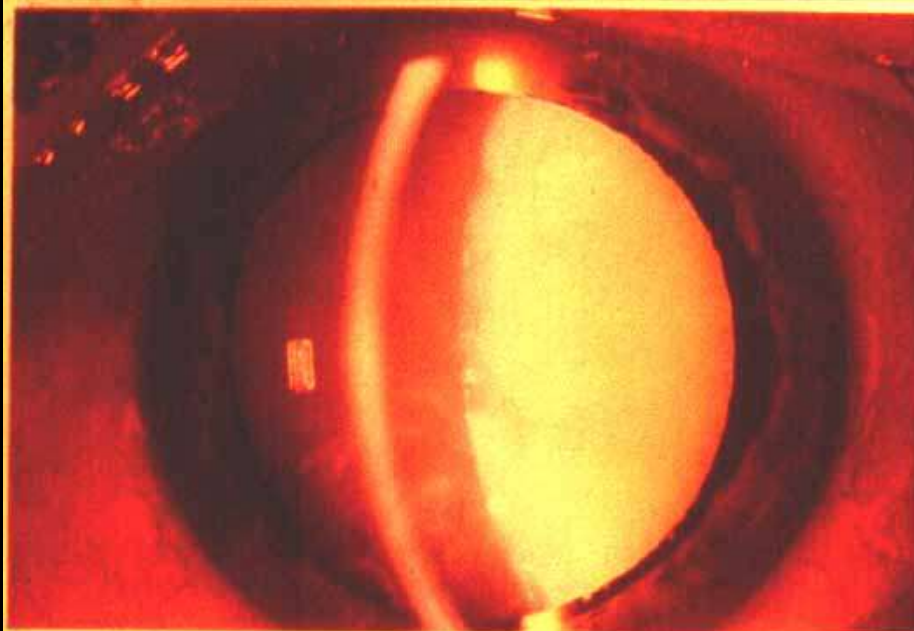


FIG 9—Mature cataract.

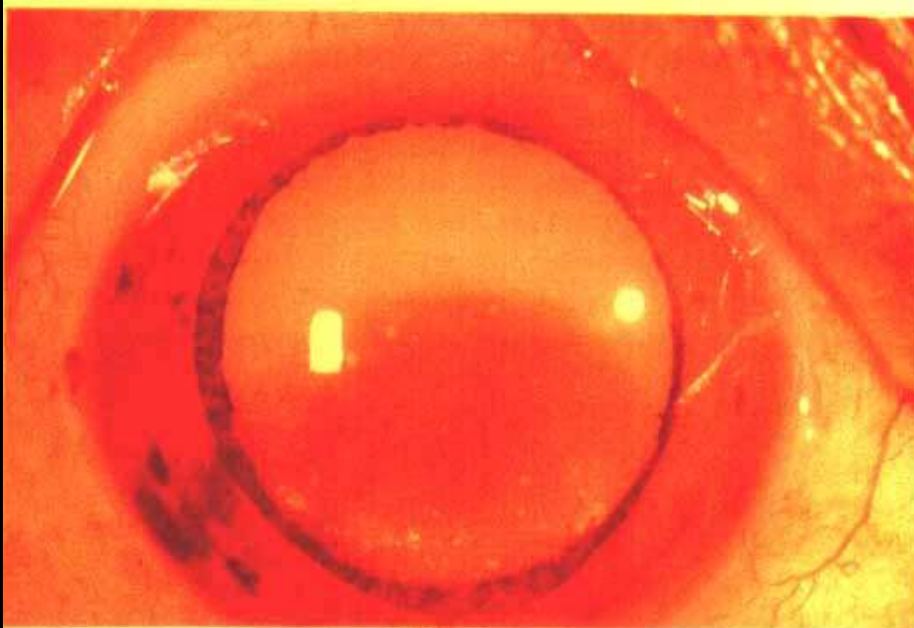


FIG 10—Morgagnian cataract.

Follow-up in diabetic retinopathy

- Normal Fundus annually
- Mild N.P.D.R(a few M.A) every 9 M_S
- Moderate N.P.D.R every 6 M_S
- Severe N.P.D.R every 4 M_S
- C.S.M.E every 2-4 M_S
- P.D.R every 2-3 M_S

Follow-up in pregnancy

- Before conception
- First trimester
- Every 3 M_S

