

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**

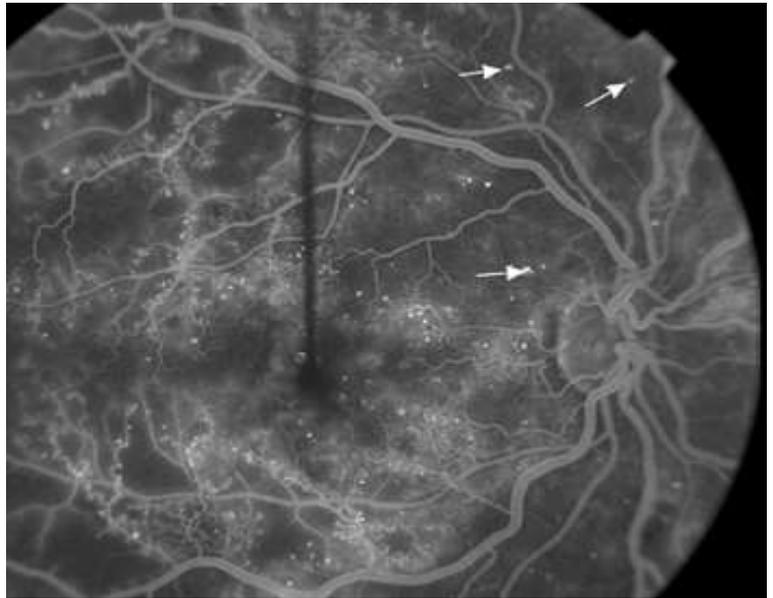
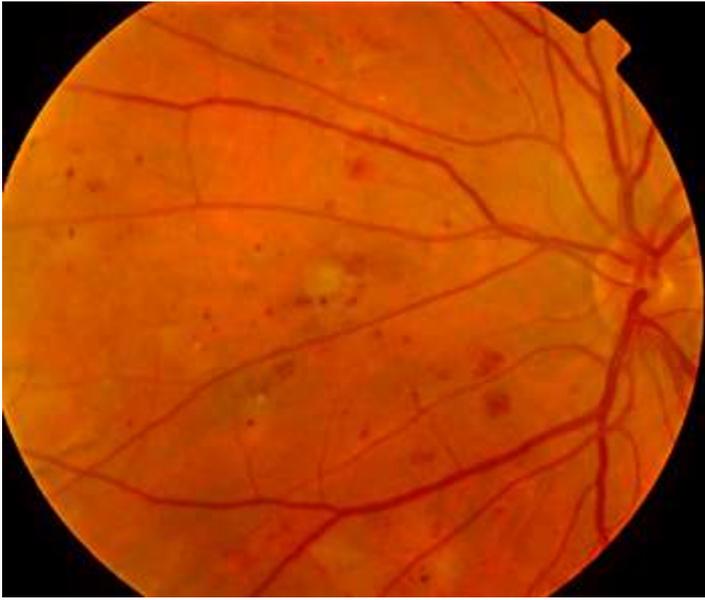
FIGURE 12.9 Ophthalmic Complications of Diabetes Mellitus

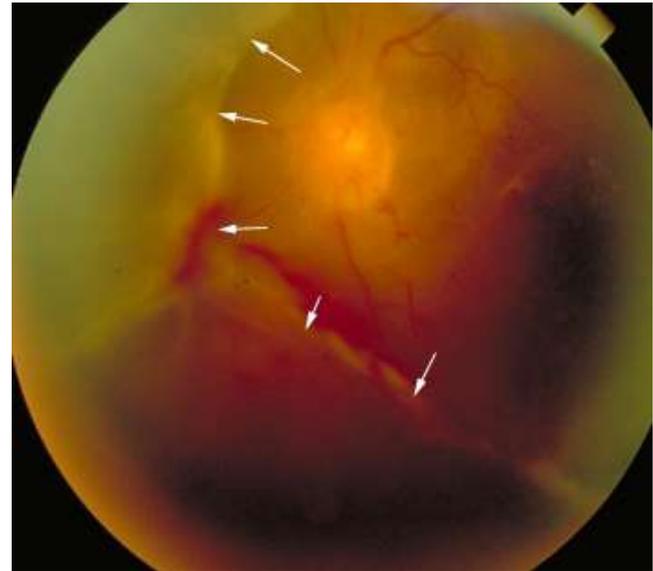
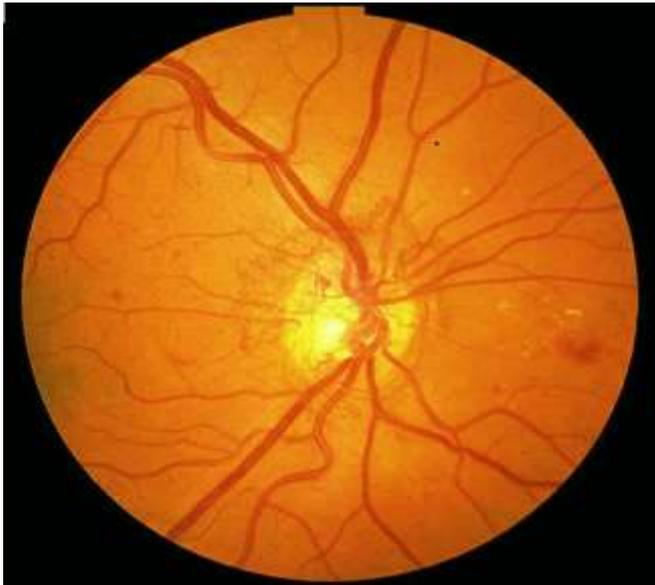
Corneal abnormalities
Glaucoma
Iris neovascularization

Cataracts
Optic nerve abnormalities
Diabetic retinopathy

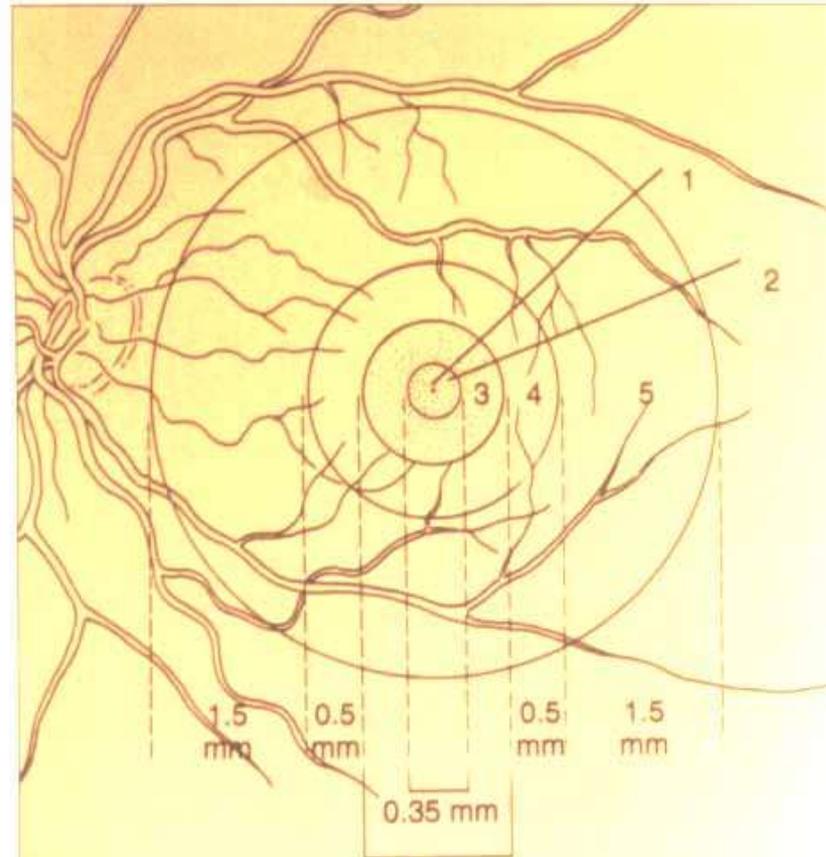
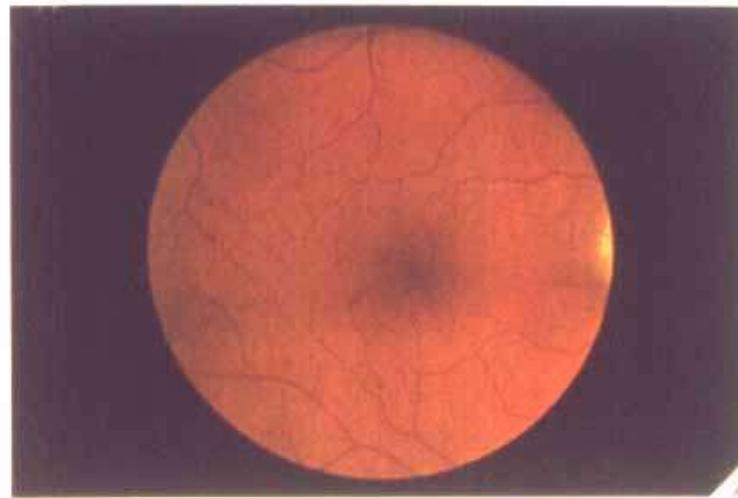
FIGURE 12.10 Prevalence of Diabetic Retinopathy

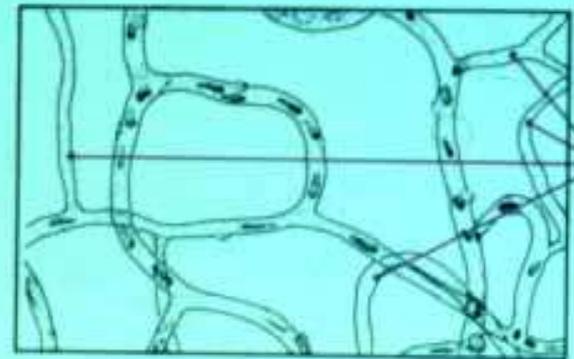
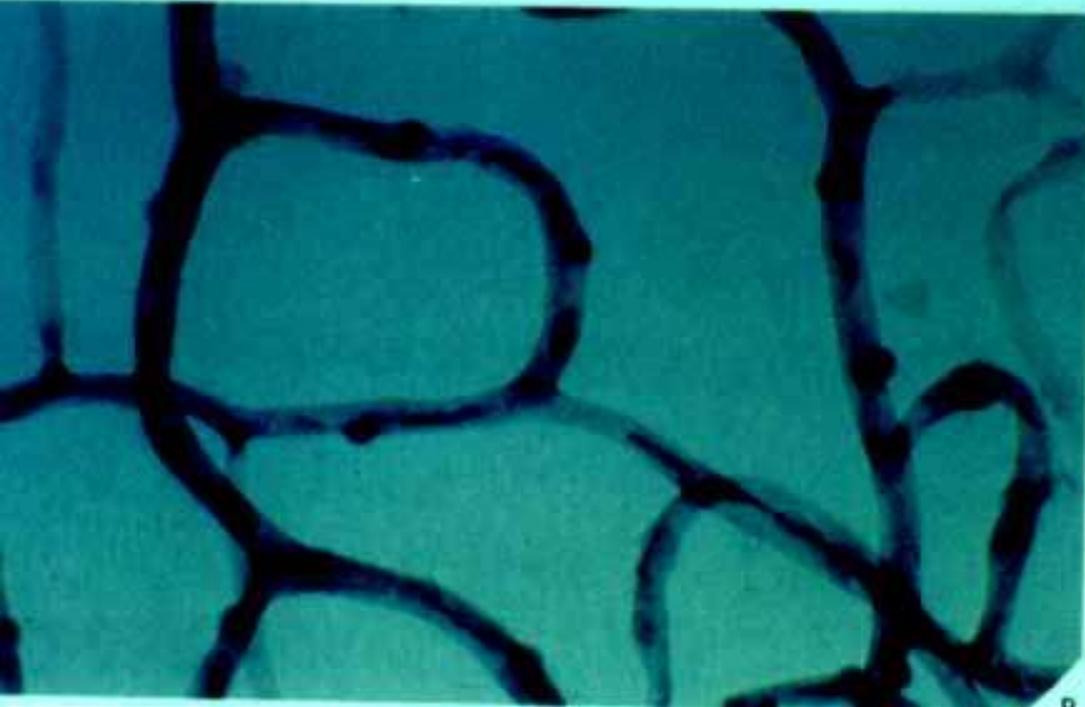
25% of total diabetic population have diabetic retinopathy
Over 90% of all diabetics will acquire retinopathy at some point during their lifetime





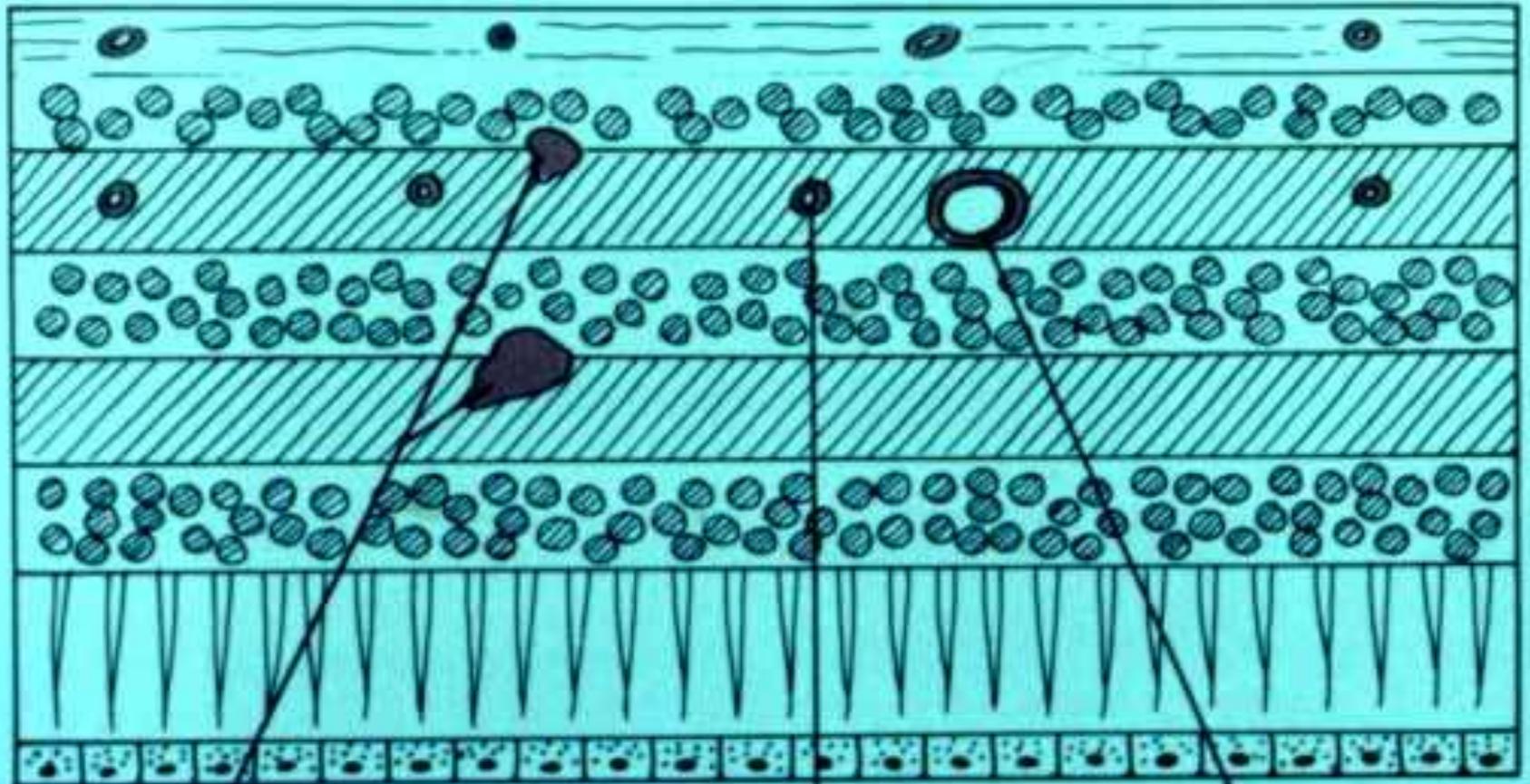
2.9 | A. H. macular fovea (3)





Nonviable capillaries

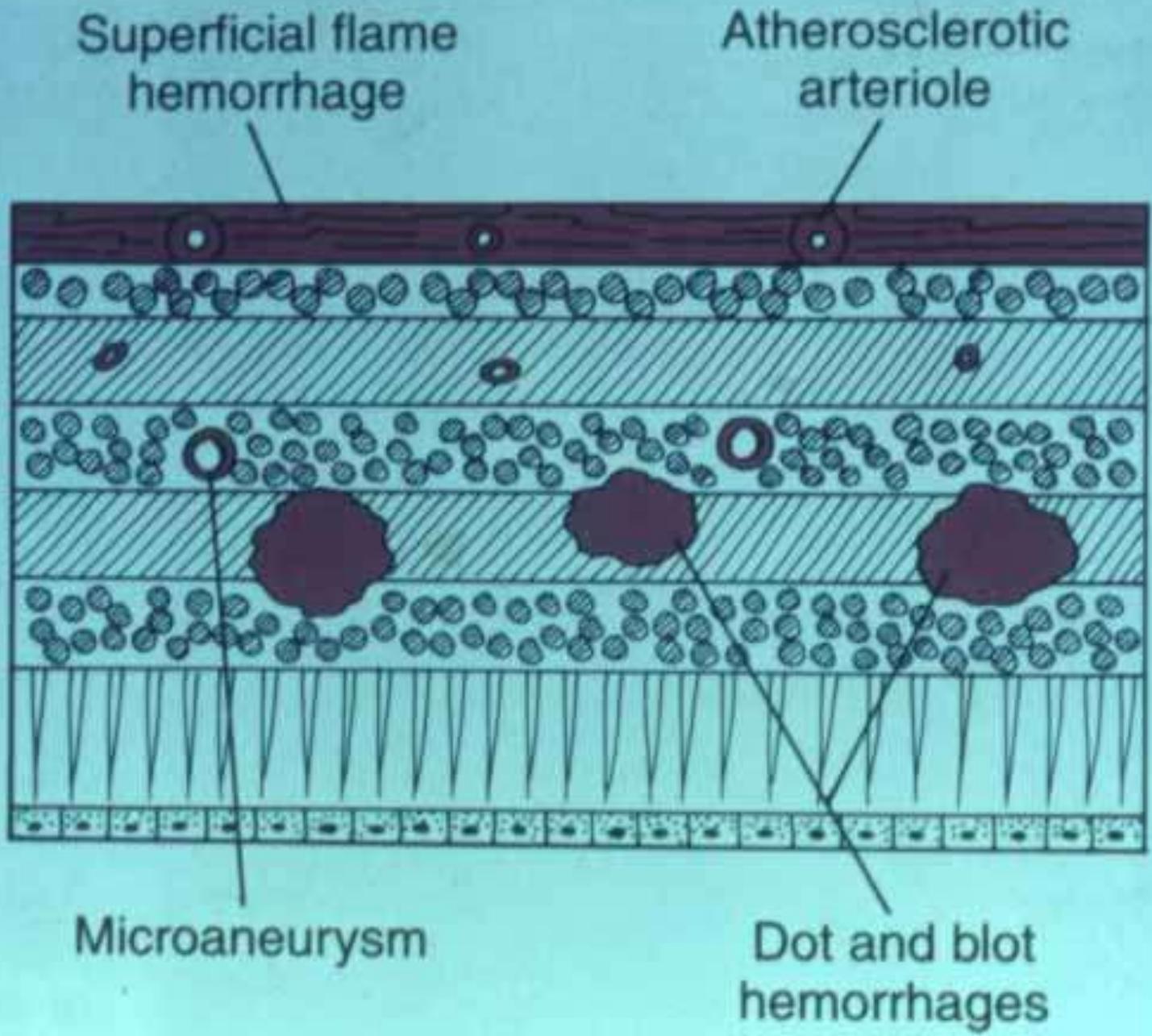
Early BDR

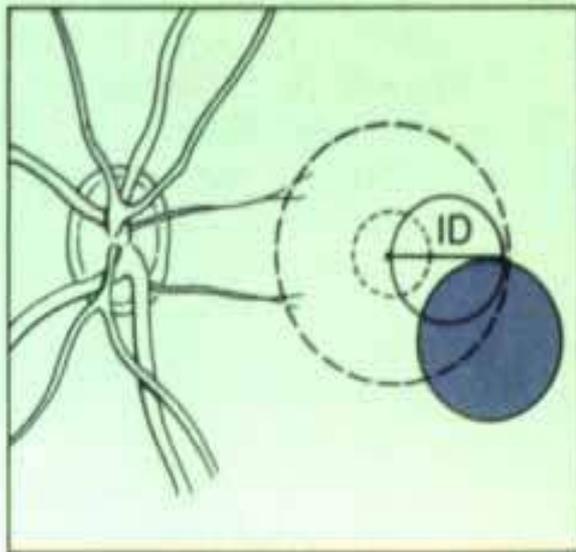


Hemorrhages

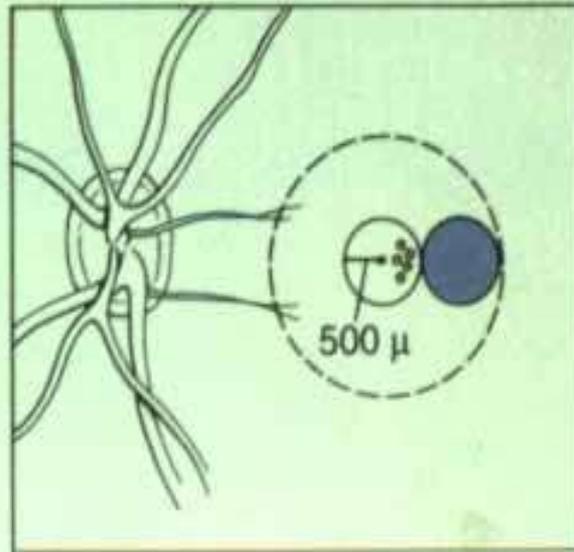
Normal
capillary

Microaneurysm

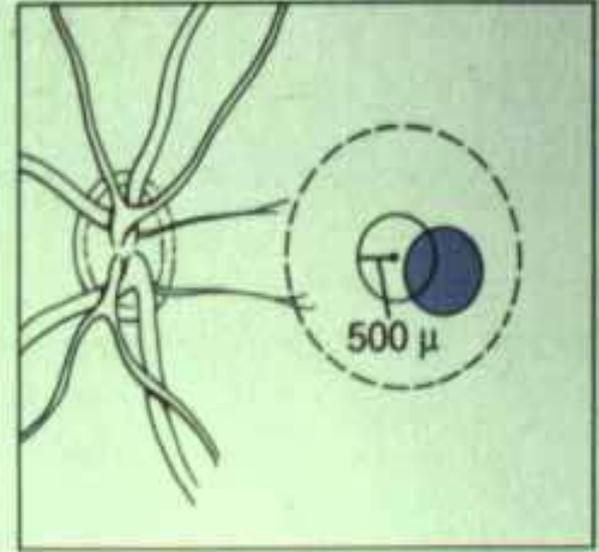




A. One disc area thickening within 1 disc diameter of center of fovea



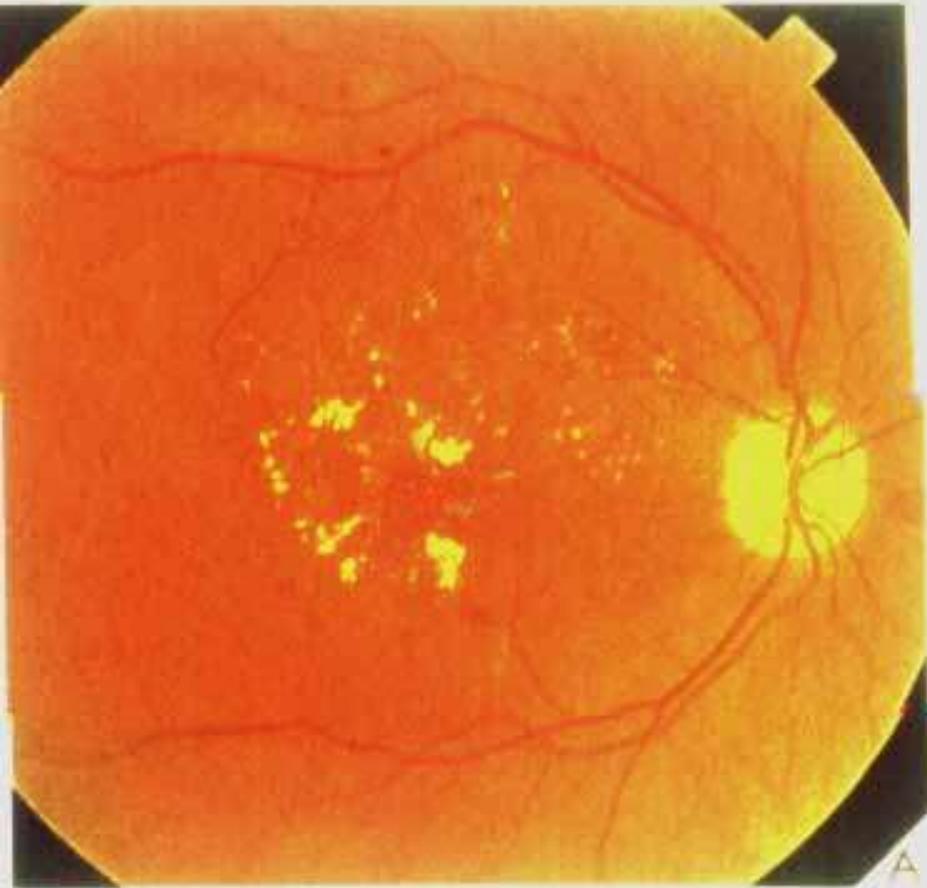
B. Hard exudate within 500 μ of center of fovea with associated thickening

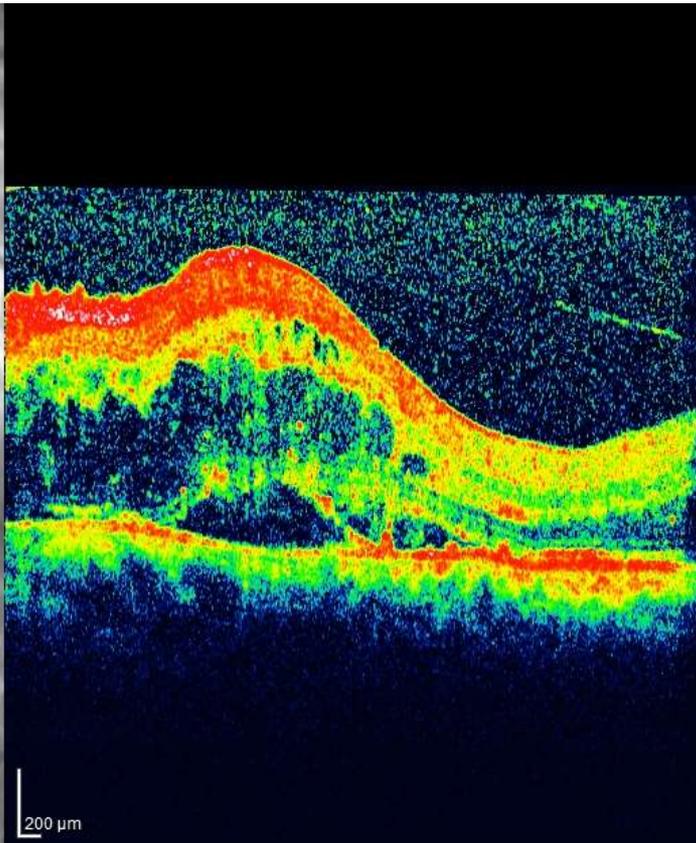
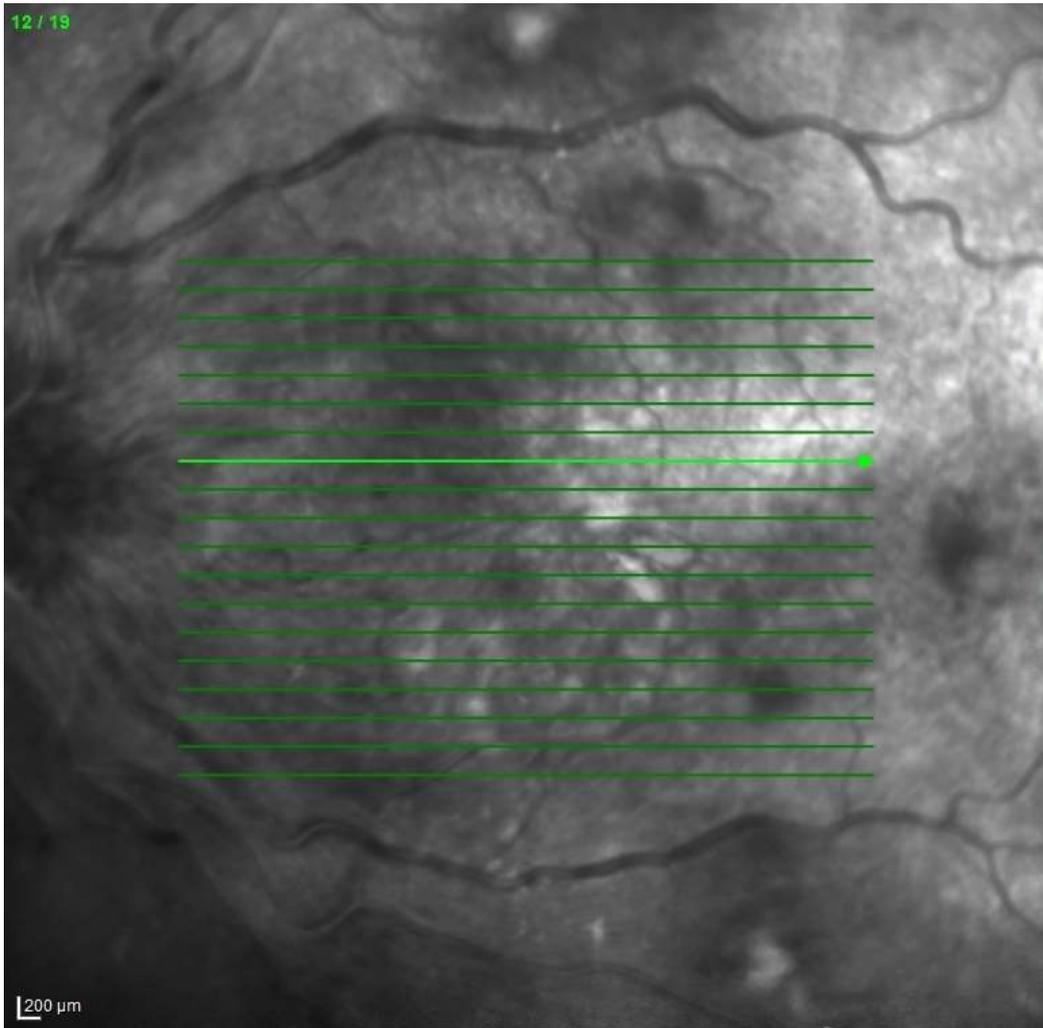


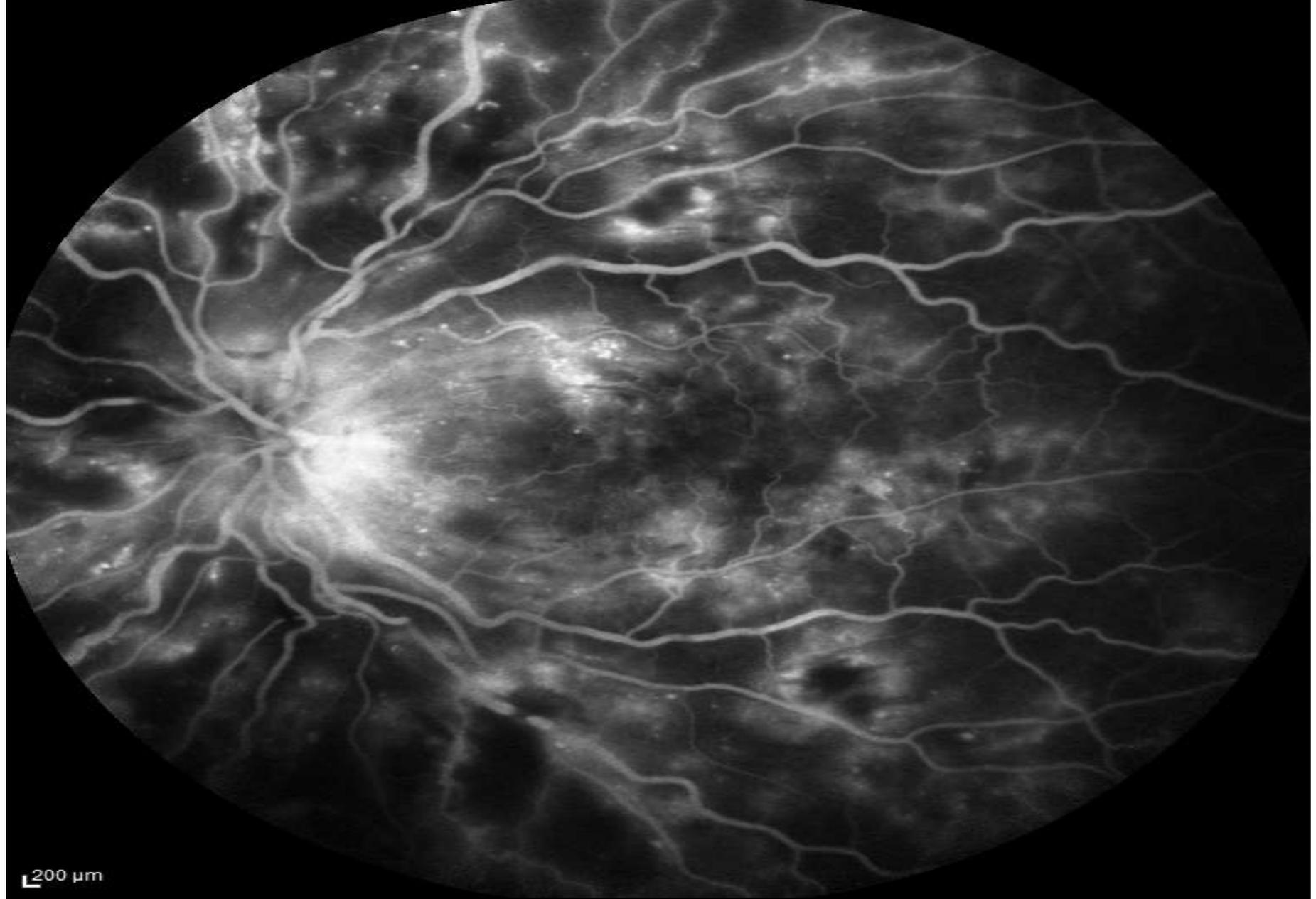
C. Retinal thickening within 500 μ of center of fovea

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).



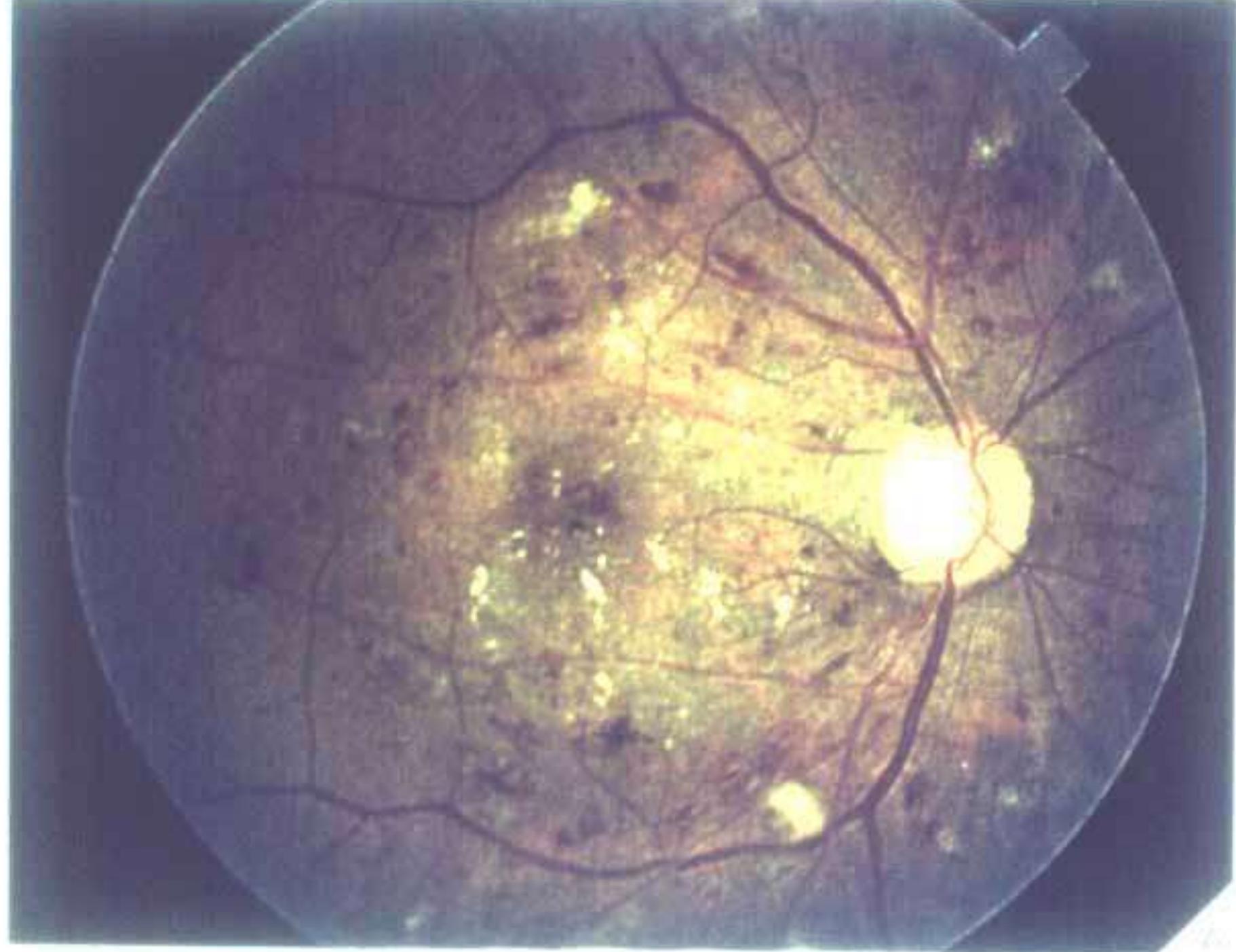




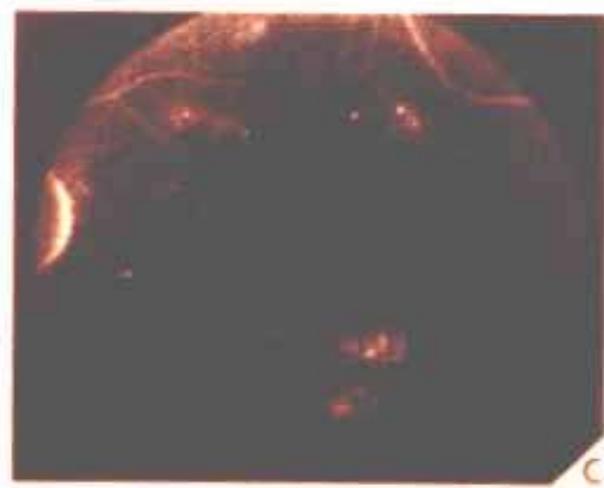
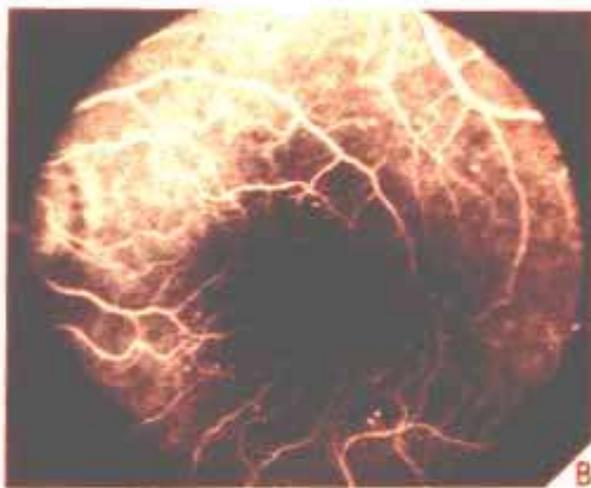
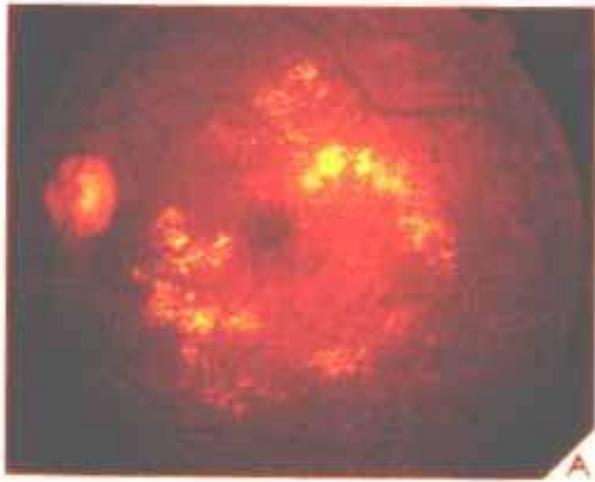
200 μ m

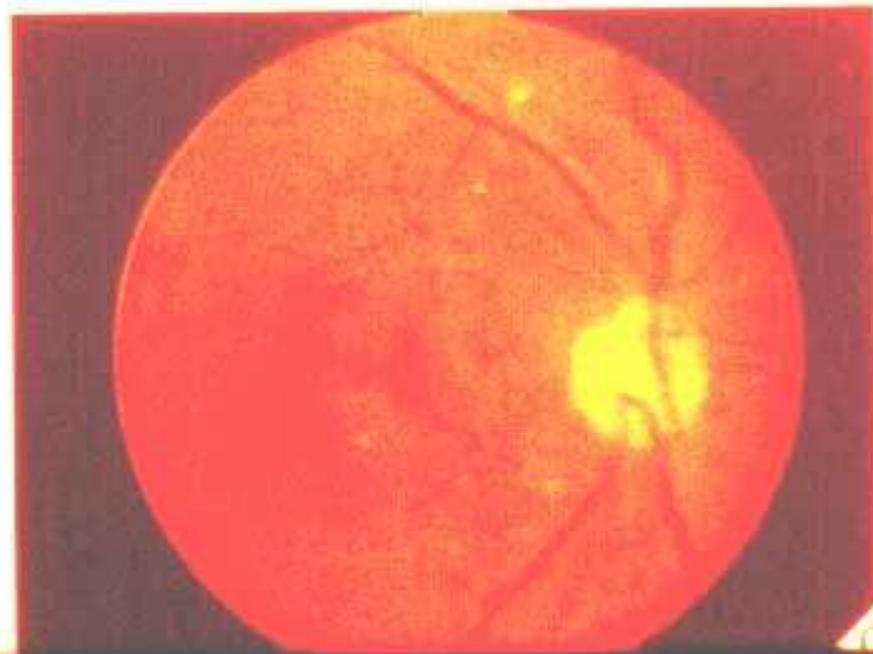
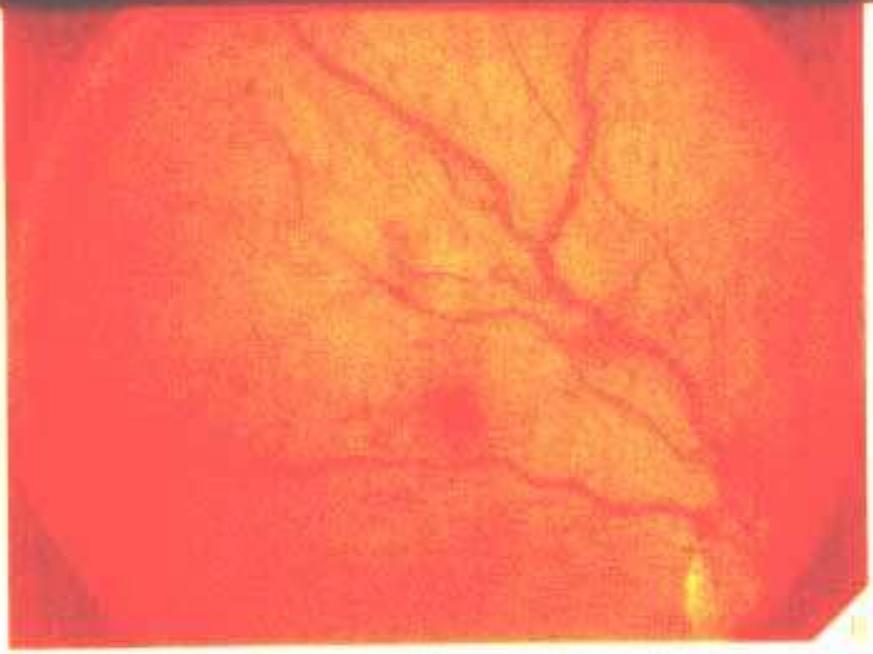
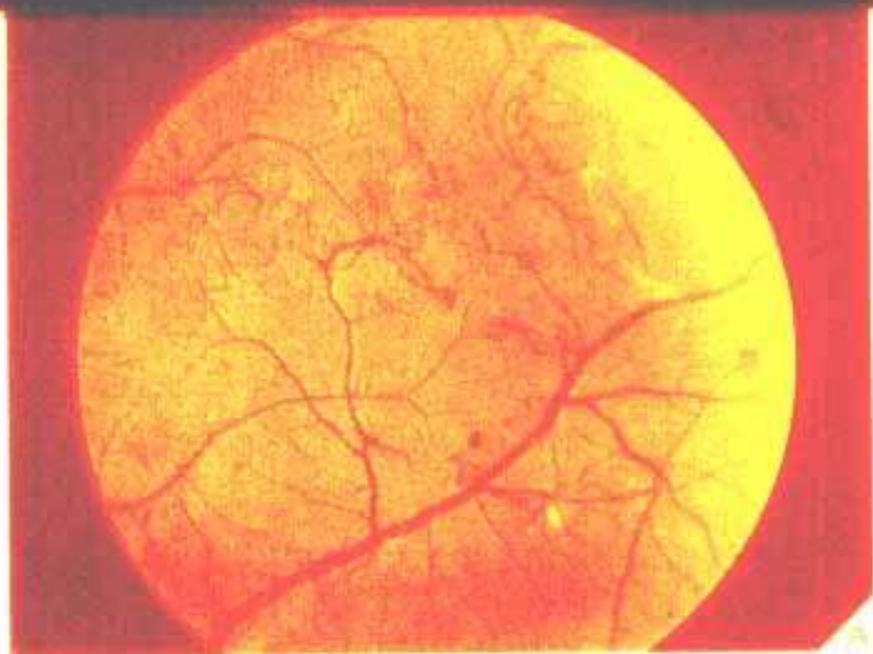
5/10/2016, OS

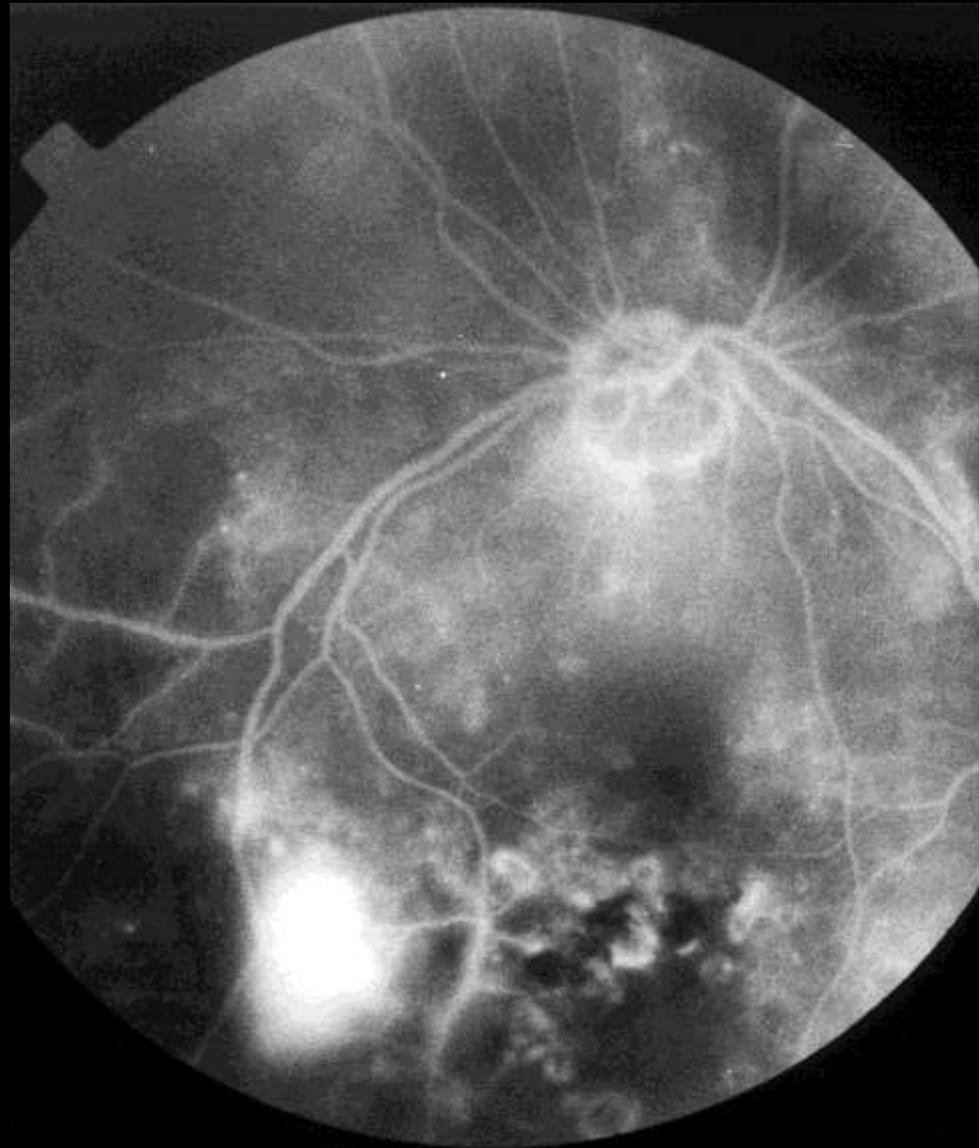
FA 4:12.06 55° ART(9)



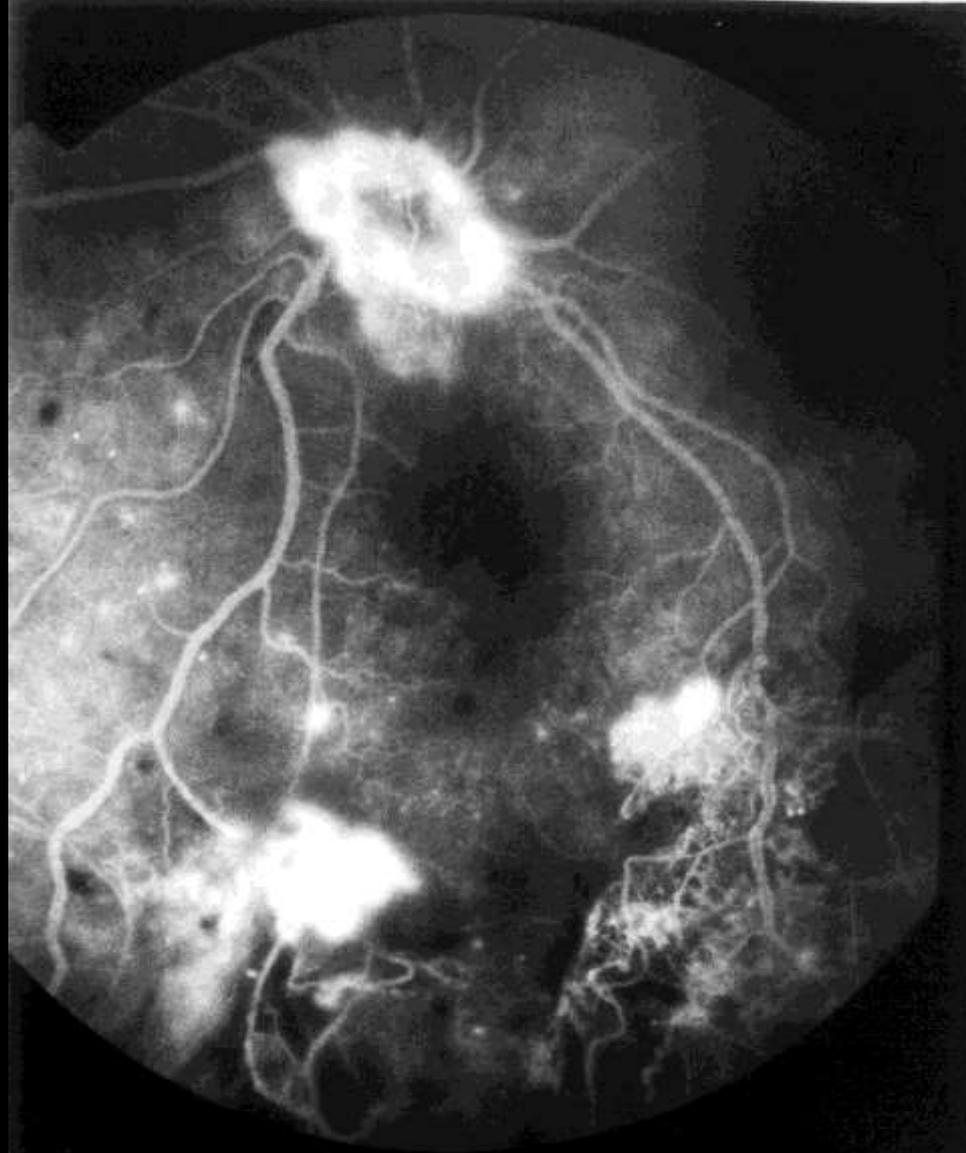
SYSTEMIC DISEASES



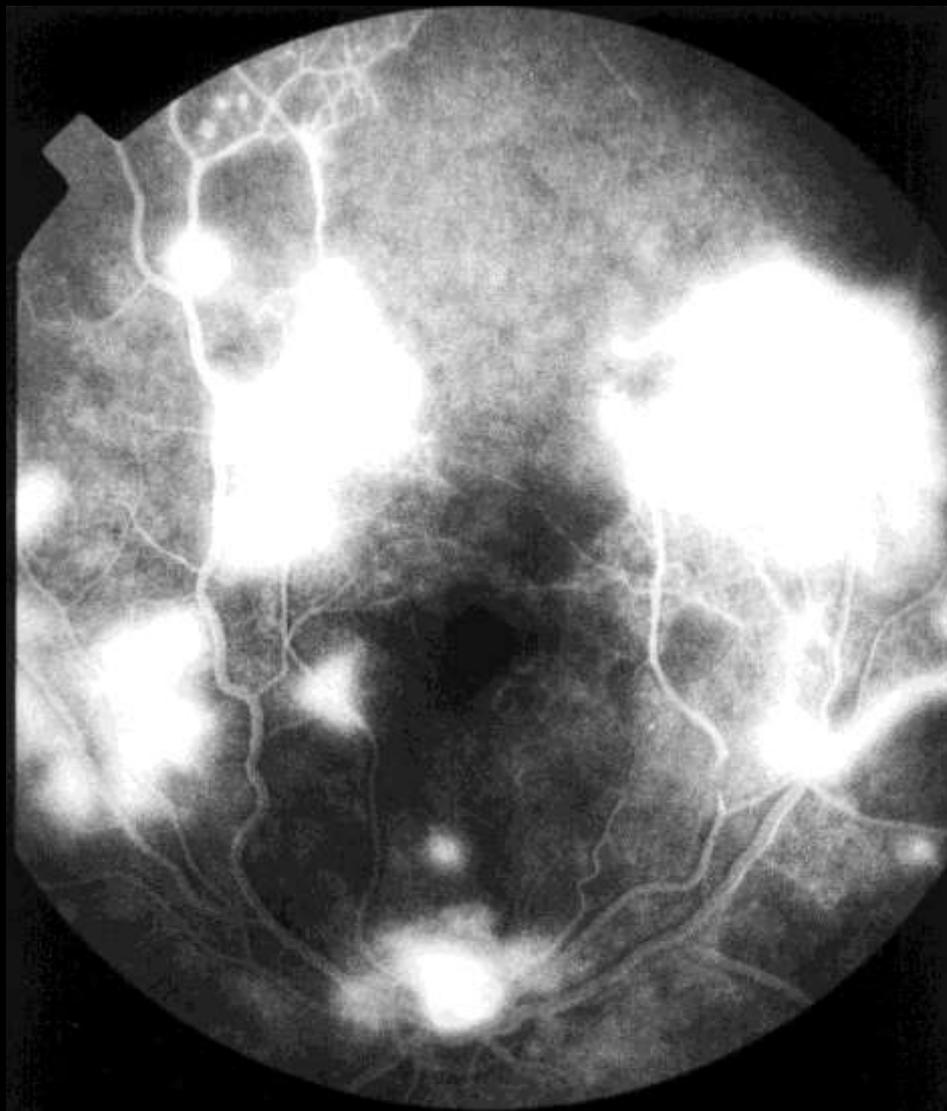




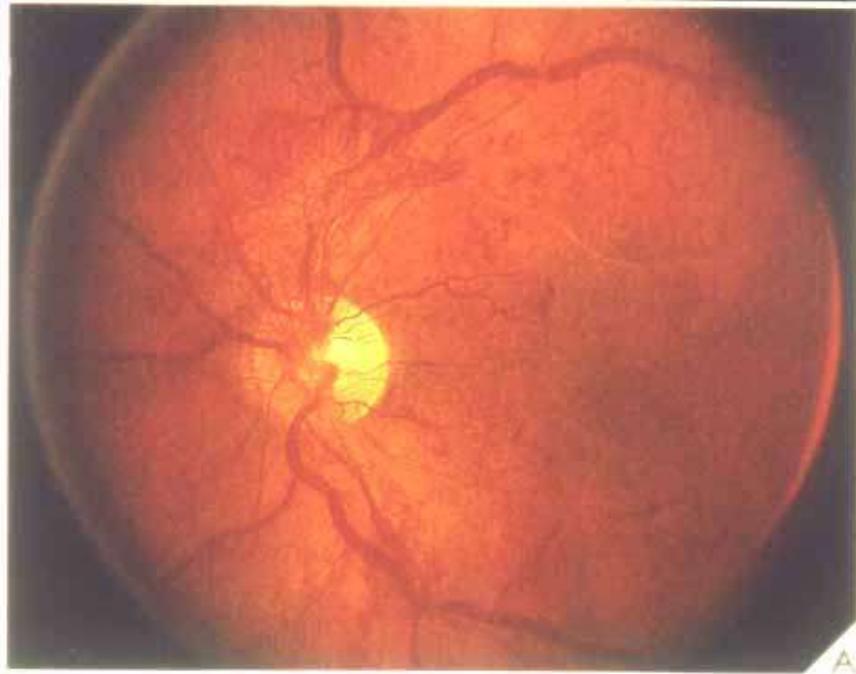
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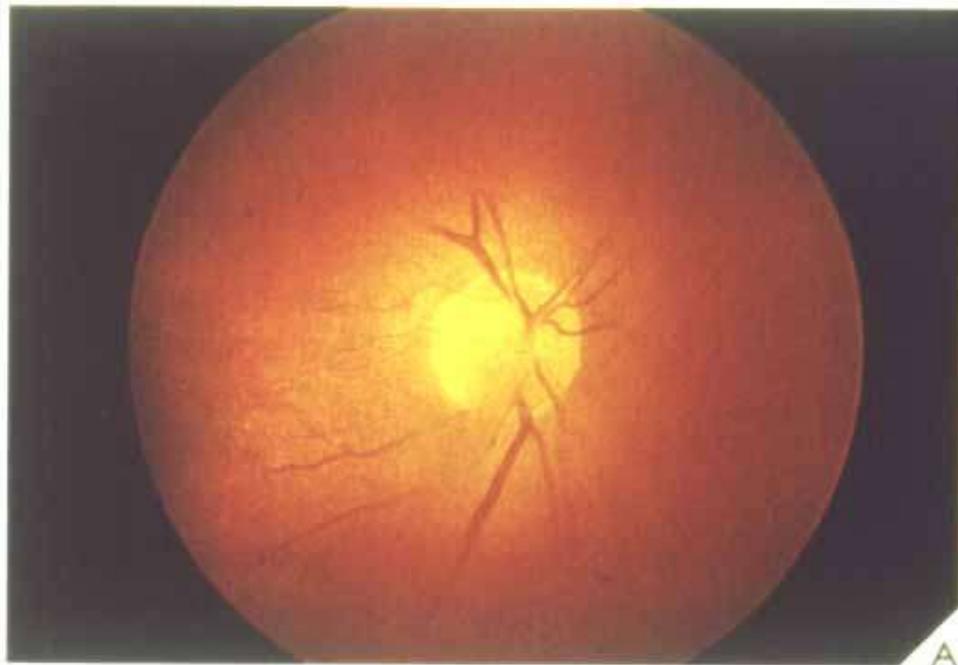


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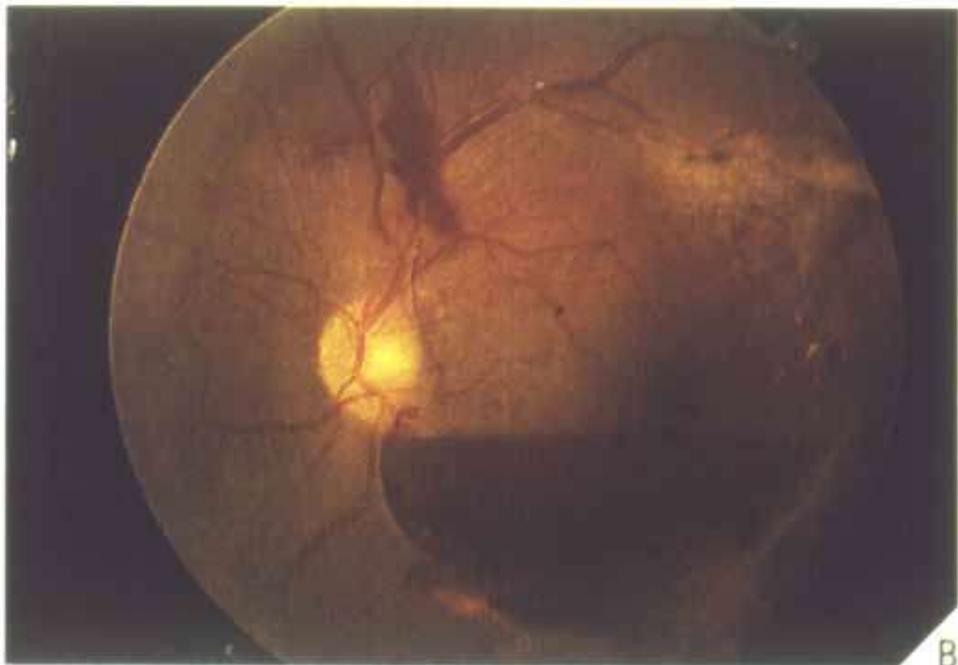


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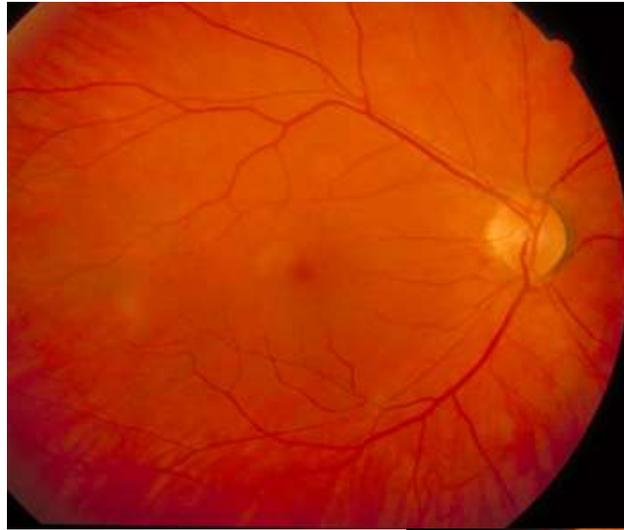


A



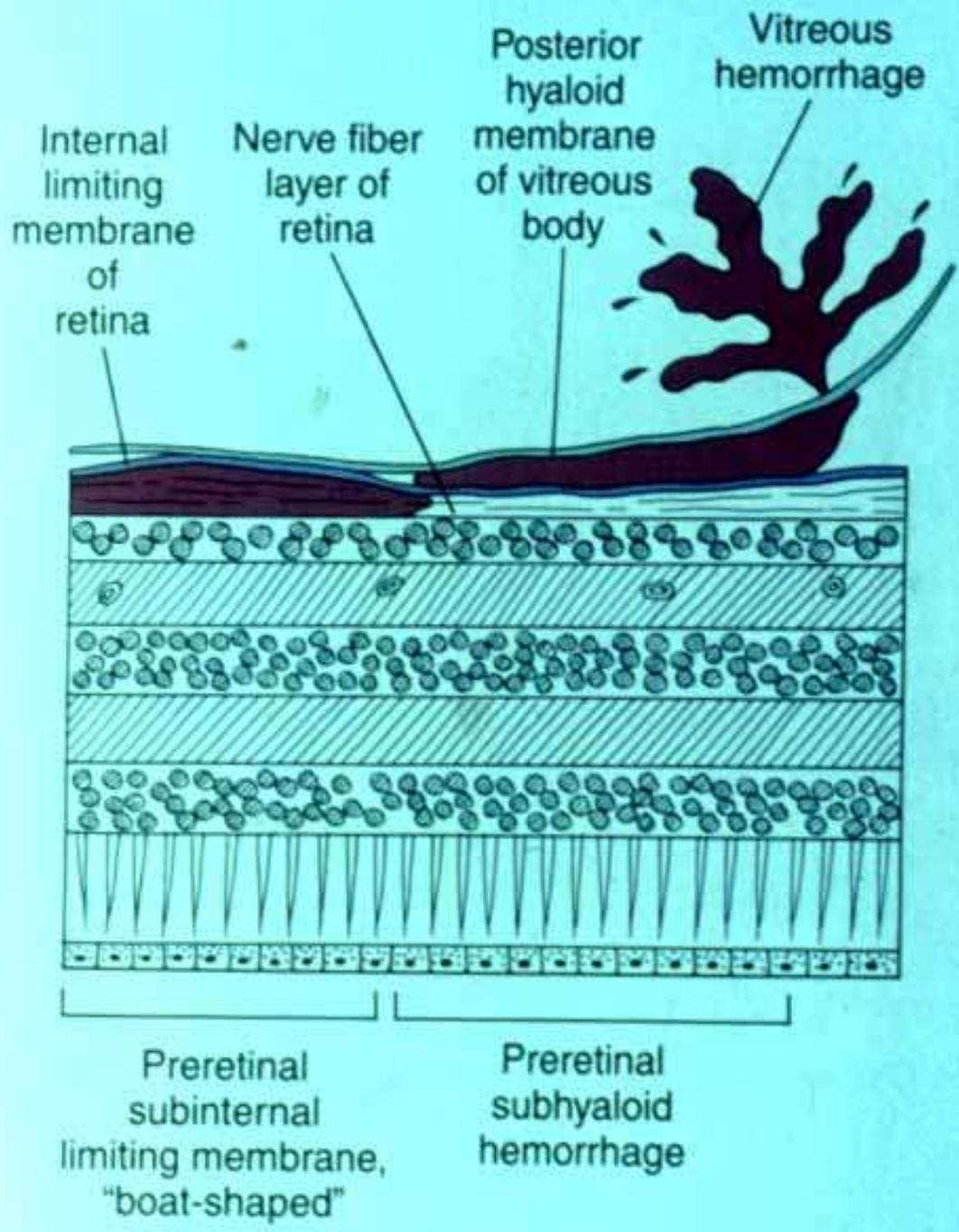
B

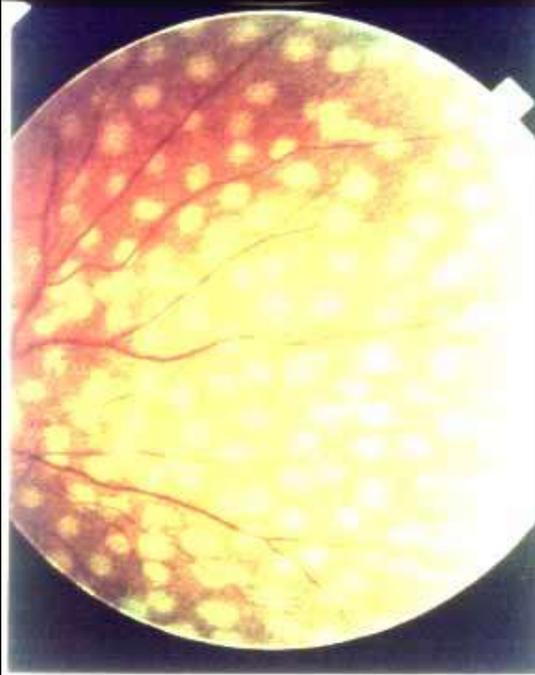
Hypertensive retinopathy



Harmful effects of systemic conditions on DR

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





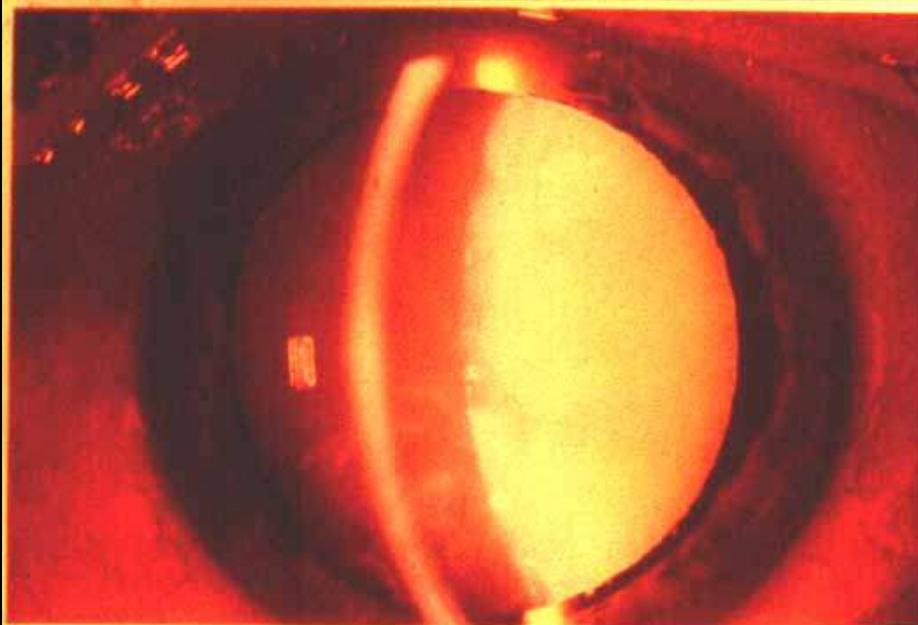


FIG 9—Mature cataract.

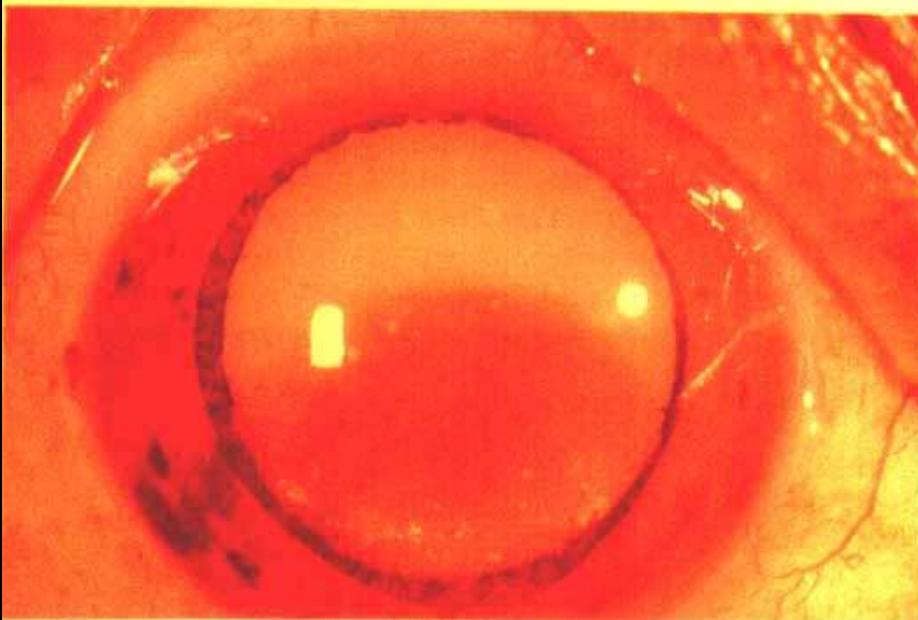


FIG 10—Morgagnian cataract.

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

