
CLINICAL FINDINGS IN
DIABETIC RETINOPATHY
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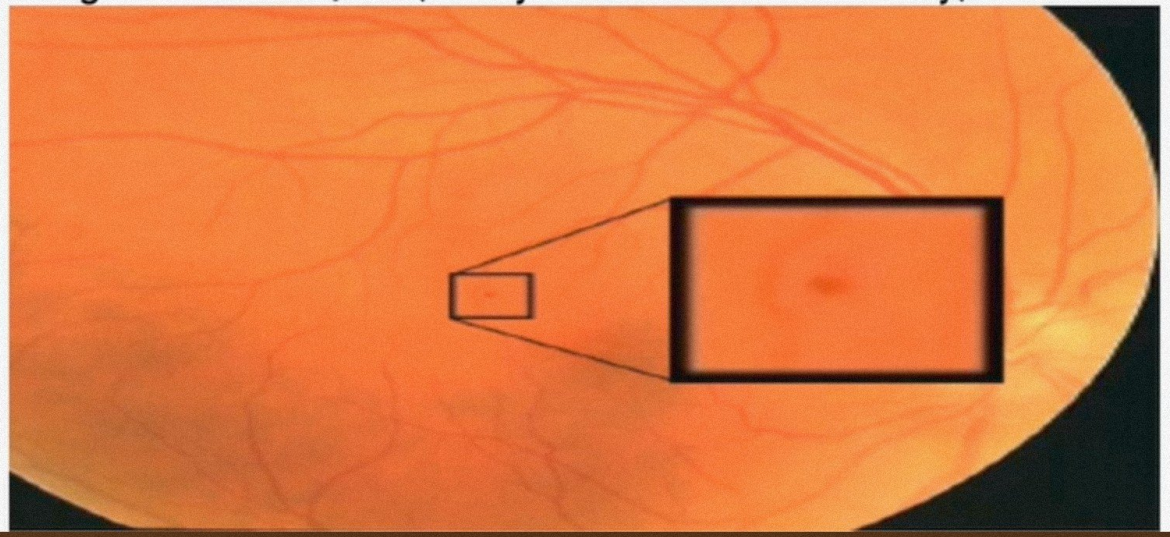
MICROANEURYSMS (MA)

- First ophthalmoscopically detectable signs of DR.
- Appears as small red dots.
- Microaneurysms are usually 12 to 100µm in size; those greater than 30µm is visible ophthalmoscopically.
- Hemorrhages are usually larger than 125µm (Early treatment DR Study)



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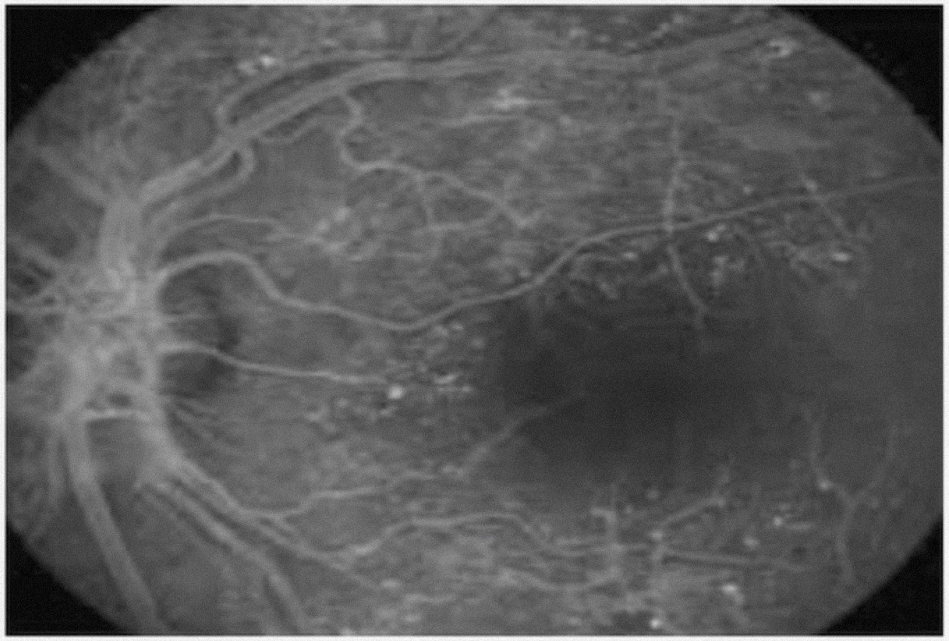
ON FFA (MICROANEURYSM)

- Tiny hyperfluorescent dots, typically more numerous than visible clinically & remain hyperfluorescent without any change in size



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RETINAL HEAMORRHAGES

Superficial hemorrhage

- Nerve Fibre Layer
- Feathery or Flame Shaped
- Tighter organization of the cells & limited extracellular space leads the blood to follow the configuration of the axons

Deep heamorrhages

- Outer Plexiform layer / Inner Nuclear Layer
- Blot Shaped Dot & blot
- compact middle layers of the retina

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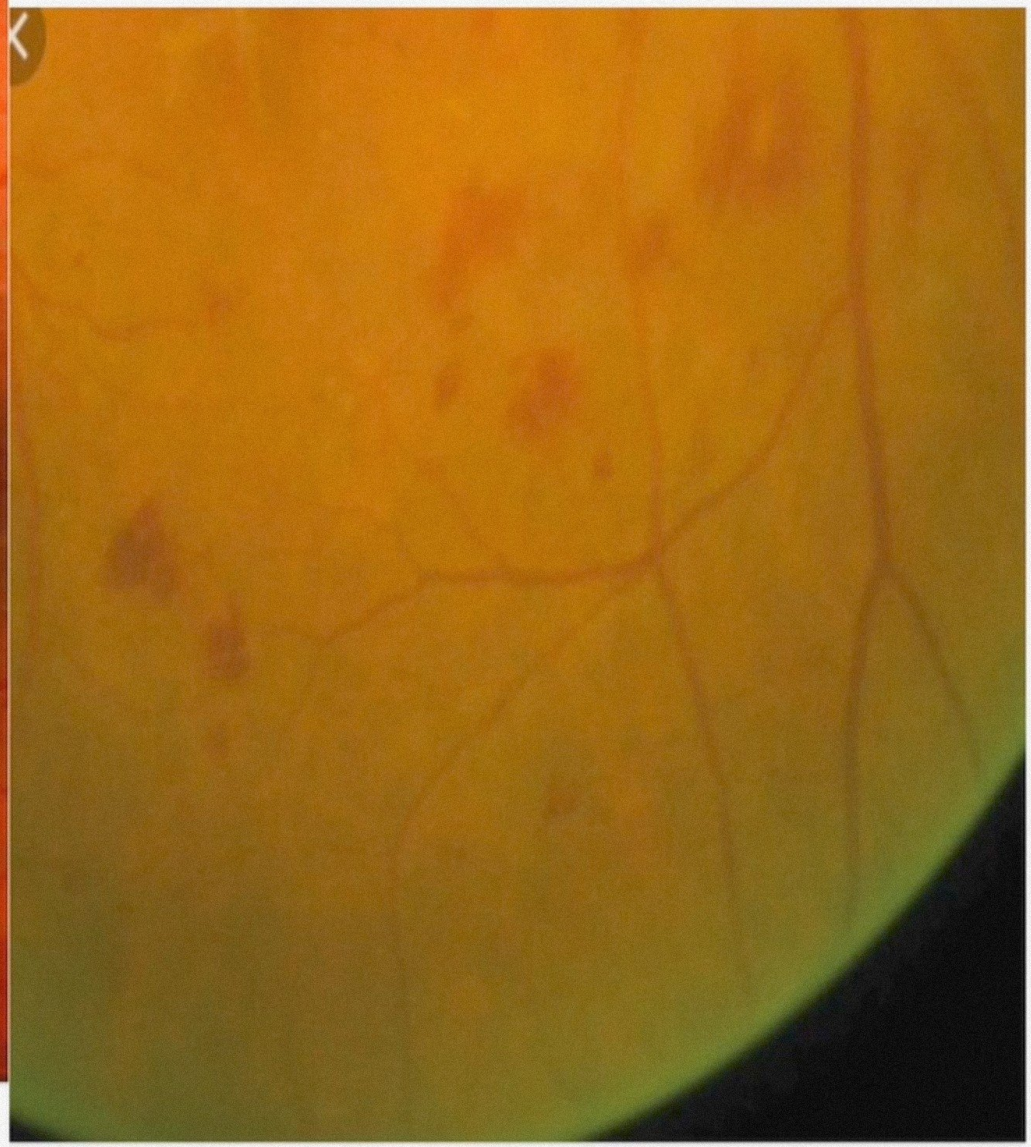

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HARD EXUDATES

- These are a yellowish, well-circumscribed accumulation, deep to the retinal vessels in the outer plexiform nerve fiber layer.
- HE are formed by the deposition of lipid & lipoproteins and are the sign of abnormal vascular permeability
- Although HE can be found anywhere in the retina, they have a predilection to congregate in the macula.
- Pt may have moderate to severe loss of visual loss if the fovea is involved.

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- HE occurs in two types of retinal distribution: -
- **Circinate pattern:** a complete or partial circle separated from the leaking vessels by a clear zone.
- **Macular star:** lipid accumulate in the fine layer of Henle surrounding the macula

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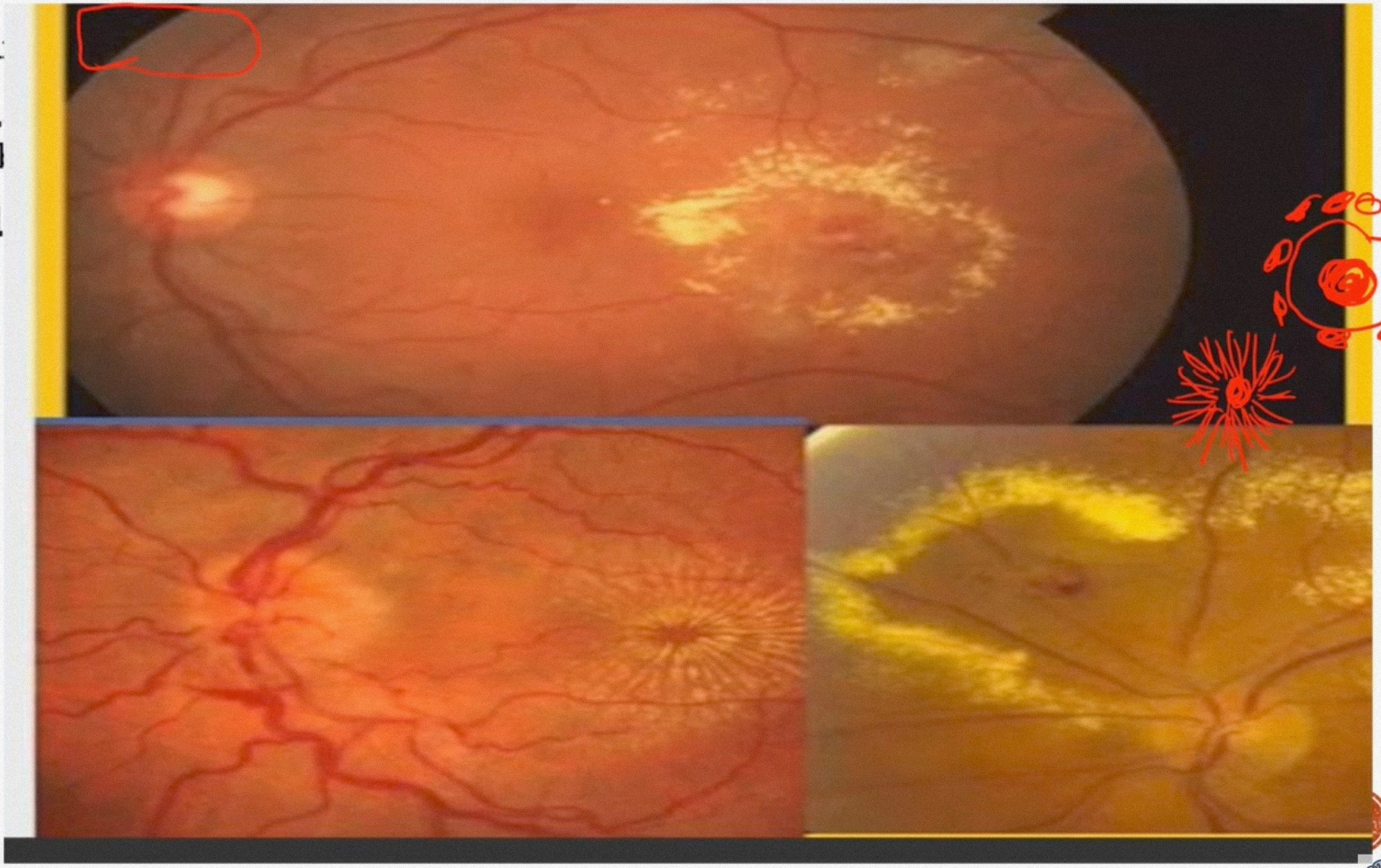
- HE occu
- **Circin**
  vessels
- **Macul**
  macula



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COTTON-WOOL SPOTS/SOFT EXUDATES/CYTOID BODIES/NERVE INFARCTS

- Lie in the nerve fiber layers of retina.
- Represents ophthalmoscopic appearance of a microinfarct, their presence implies ischaemic microvascular disease.
- Appear initially as **white fluffy patches**, most commonly in the posterior pole (retinal nerve fibre layer is the thickest), become smaller & more circumscribed with time, absorbing completely after 6-8 weeks

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- Indicative of extensive ischaemia of the retina and manifests as saccular bulges in the wall of the vein.
- Seen frequently adjacent to areas of nonperfusion.
- Reflects increasing retinal ischemia
- Most significant predictor of progression to PDR

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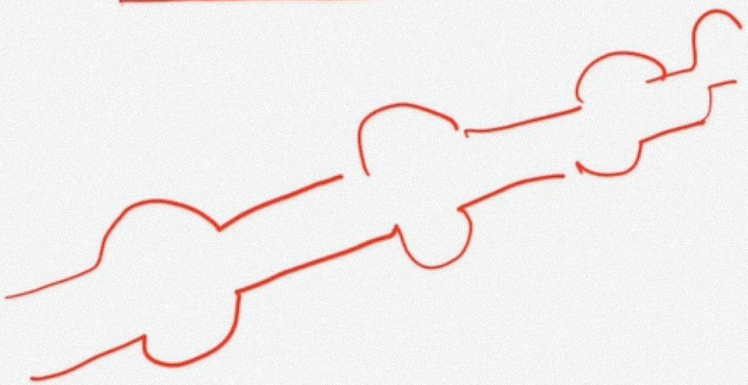

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IRMA

- Often found on the borders of the nonperfused retina
- irregular, intraretinal vessels that run from arterioles to venules without crossing major blood vessels.
- FFA shows focal hyper fluorescence associated with adjacent capillary dropout areas but they don't leak.

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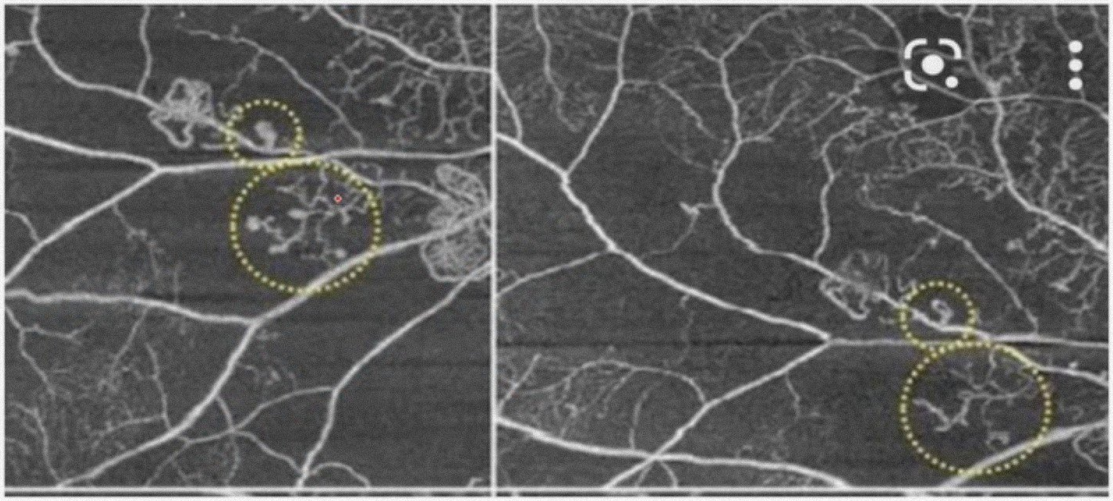

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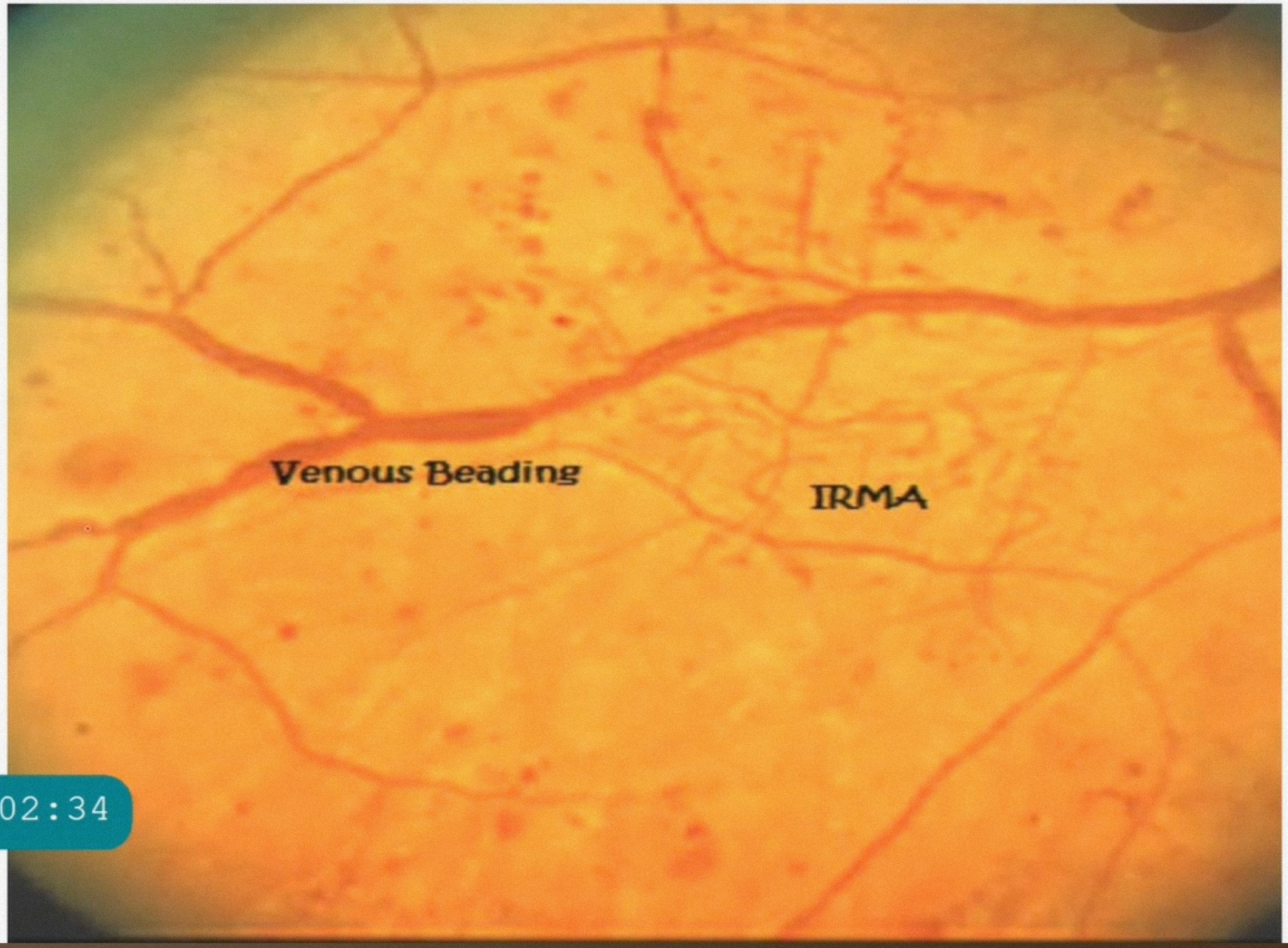

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DIABETIC PAPILLOPATHY

- complication of diabetes mellitus characterized by optic disc swelling and edema of optic nerve head.
- Currently accepted criteria for diagnosis of diabetic papillopathy include:
- Presence of diabetes mellitus (Appr. 70% type 1, 30% type 2)
- Optic disc oedema
- Only mild optic nerve dysfunction

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