

Picture Quiz-Opthalmology

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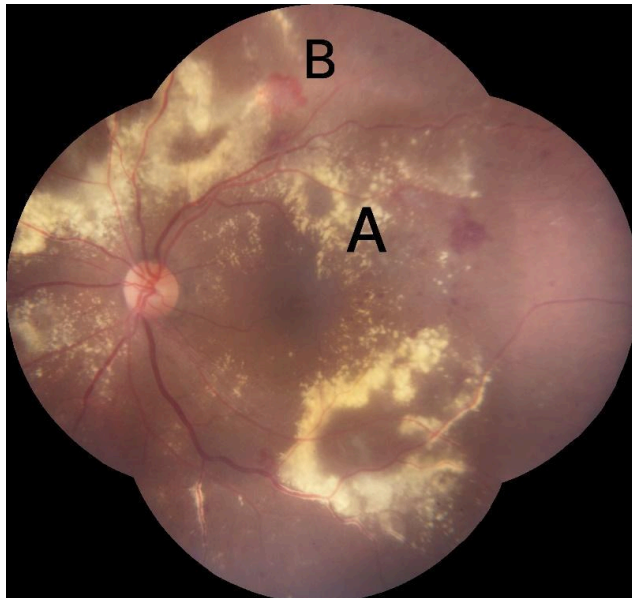
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CLINICAL SCENARIO :

A 61-year-old lady presented to the OPD with complaints of blurred vision in her left eye for a few months. The onset was insidious, painless and progressive in nature. She had similar complaints in the right eye 12 years back, for which cataract surgery, multiple injections and lasers were done. She is a k/c/o Type 2 diabetes mellitus for 18 years, dyslipidemia for 3 years and reports poor drug compliance.

Interpret the fundus photograph of the left eye.



Interpretation :

Media clear, CDR 0.4, Colour pink, Foveal reflex dull, Multiple dot blot haemorrhages scattered in all 4 quadrants, IRMA seen in the superotemporal arcade 3 DD away from the fovea. NVE seen:

1. Supero-temporal arcade 2 DD superior to fovea

2. Supero-temporal arcade 2.5 DD supero-temporal to fovea
3. Inferotemporal arcade 3 DD inferior to fovea

Hard exudates are scattered in all 4 quadrants and also involve the macula. CSMO

- A. Hard exudates are bright, yellowish-white, waxy deposits with well-defined borders. They are formed from lipids and proteinaceous materials leaking from damaged blood vessels in the retina. They are located in the outer plexiform layer of the retina. Can form a circinate ring pattern or star shape in severe cases.
- B. NVE (Neovascularisation elsewhere) is the new and abnormal growth of blood vessels on the retinal surface, but away from the optic disc. They appear as a fine tangle of delicate new vessels. The primary cause is ischemia, lack of oxygen and nutrients, which triggers growth factors like VEGF to create new vessels.

Answer: **DIABETIC RETINOPATHY (DR)**. The left eye shows PROLIFERATIVE DIABETIC RETINOPATHY WITH CLINICALLY SIGNIFICANT MACULAR OEDEMA (CSMO)

The most common cause of new blindness in industrialised countries is mainly due to a delay in treatment.

What Is The Prevalence?

DR has a prevalence of around 40% of diabetics. The prevalence of DR in type 2 diabetes is 67% 10 years after the diagnosis has been made, and 10% will have proliferative DR. DR is more common in type 1 than type 2 diabetes.

What Are The Risk Factors For DR ?

Duration of diabetes, poor glycemic control, hypertension, nephropathy, drugs (Pioglitazone worsens diabetic macular oedema), pregnancy (rapid progression of DR), hyperlipidemia, anaemia, etc.

What Are The Treatment Options Available for DR ?

Patient education about lifestyle modifications, weight reduction, exercise, and other risk factors like hypertension, hyperlipidemias should be addressed :

- Quit smoking .
- Anaemia, renal failure, etc. should be addressed.
- Intravitreal anti-VEGF agents: ranibizumab, bevacizumab, aflibercept or faricimab.
- Laser photocoagulation: focal laser (frequency doubled YAG, diode or argon) burns applied to leaking micro-aneurysms 500-3000 microns away from the foveola
- Subthreshold macular laser therapy: very short laser pulses are used. No clinical trials available showing superiority to conventional laser or anti-VEGF therapy.
- Intravitreal triamcinolone (in pregnancy) and sustained-release steroid implants (Ozurdex)

What Complication Can Lead To Vision Loss And What Is The Treatment Modality For The Same?

TRD (tractional retinal detachment) is seen in high-risk PDR and advanced diabetic eye disease, vitreous haemorrhage, and vitreomacular traction associated with macular oedema. Pars plana vitrectomy (PPV) is the treatment of choice for the same.

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