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Clinical Case Report

Diabetic Retinopathy (DR)

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It is a Complication of Diabetes that affects blood vessel of retina and lead gradually towards Blindness.

Incidence

70% million people affected world wide.

Pathophysiology

DR is a microangiopathy primarily affecting the precapillary arterioles, capillaries, venules and post capillary venules.

The basic component of damaging process are microvascular occlusion and microvascular leakage.

Figure 1

Figure 2

Risk factors

- Duration of Diabetes
- hyperlipidemia
- Poor metabolic control
- Nephropathy
- Hypertension
- Anemia
- Obesity
- Smoking

Clinical manifestation

- Non-proliferative diabetic retinopathy (NPDR)
- Proliferative diabetic retinopathy (PDR).

Non proliferative diabetic retinopathy

(NPDR) include micro-aneurysms, small 'dot and blot' haemorrhages, 'splinter' haemorrhages, intraretinal microvascular abnormalities (IRMA) and 'cotton wool' spots.

Figure 3

Proliferative diabetic retinopathy (PDR)

Micro-vascular pathology with capillary closure in the retina leads to hypoxia of tissue. The hypoxia leads to release of vaso-proliferative factors which stimulate new blood vessel formation to provide better oxygenation of retinal tissue. These new vessels

growing on the retina are called neovascularization elsewhere (NVE) and those on the optic disc are called neovascularization of the disc (NVD). These new vessels can bleed and produce hemorrhage into the vitreous.

Figure 4

Diagnosis

- Direct Ophthalmoscope
- Indirect Ophthalmoscope
- Biomicroscopy with contact lens and non contact lense
- Fundus Fluorescein Angiography for assessment

Treatment

- Medical (control of risk factor)
- Laser (Focal/Grid/Panretinal Phtotocoagulation)

Surgical (Pars plana vitrectomy is indicated)

1. Dense Persistent vitreous haemorrhage.
2. Tractional retinal detachment.
3. Epiretinal Membrane.

Figure 5

Figure 6

Figure 7

Figure 8

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