

## **OCT angiogram using swept source Optical Coherence Tomography in diabetic patients**

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### Purpose

assessment of capillary macular perfusion in diabetic patients.

### Methods

80 eyes of diabetic patients were included in this study. Age range is from 25-65 years old. All patients were known to be diabetics more than 10 years.

20 eyes showing no significant diabetic retinal changes.

20 eyes with focal macular edema with central foveal thickness less than 300 microns.

20 eyes with diffuse macular edema with macular thickness not exceeding 400 microns

20 eyes with cystoid macular edema more than 400 microns.

DRI Triton swept source OCT (Topcon) was used using 3 D macular scan and line scan to assess macular thickness & morphology.

OCT angiogram was done using 6 x6 mm.

### Results

12 eyes (of 20 eyes with no diabetic retinal changes) 60% documented variable degrees of macular ischaemia.

15 eyes (of 20 eyes with focal macular edema) 75% showed notched FAZ with microaneurysms

8 eyes (of 20 eyes of diffuse macular edema) 40% showed scattered spots of capillary drop-outs in capillary network in deep retinal layer rather than superficial retinal layer with or without notched FAZ

20 eyes (of 20 eyes with CME) 100% showed moderate-severe macular ischaemia with irregular enlarged FAZ in superficial & deep retinal layers even with irregular hypo-reflective areas within homogeneity in choriocapillaris layer

### Conclusion

Macular capillary perfusion is an indicator for visual prognosis. Non-invasive OCT angiogram is an addition for accurate macular evaluation in diabetic patients as it delineated capillary perfusion in different retinal layers which might be obscured by macular edema on regular FA

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