**Original article:**

**Optical coherence tomography assisted macular thickness profile in high myopia**

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**Abstract**

Aims: To study the correlation of high myopia with macular thickness by optical coherence tomography.

Methods and Material: The macular thickness of 50 highly myopic eyes and 40 control (emmetropic) eyes from a north Indian patients was measured using the Fourier domain optical coherence tomography (FD OCT). All highly myopic patients selected for the study had a spherical equivalent of > -6.0D and IOP <21 mmHg. None of the patients included in the study had evidence of concomitant ophthalmic disease and none had undergone refractive surgery.

Results: The overall mean macular thickness in the myopic groups and control were 262.98 (±24.98) µm and 290.92 (±11.54) respectively. The total macular thickness was less in myopic eyes as compared to emmetropic eyes. But in contrast, the central foveal thickness was 265.43 (±32.69) µm in myopes and 235.95(±21.91) µm in emmetropes. The para and peri foveal retinal thickness was significantly thin in myopic eyes as compared to emmetropic eyes. Whereas central foveal thickness more in the myopes.

Conclusions: Total macular thickness was significantly decreased in myopic eyes as compared to emmetropic eyes. However central (foveal) thickness was significantly high in high myopes as compared to emmetropes. Central foveal thickness increase in high myopes may be confused with retinoschisis / retinal edema. There is therefore a need to have a macular thickness normogram for high myopes of a given population group to avoid wrong interpretation.

Key-words: Macular thickness, OCT (optical coherence tomography), Myopia.