**Influence of dioptric power on retinal nerve fiber layer thickness in myopic subjects**

Iqra Nehal1, Umer Kazi2, Asiya Saleem1

**ABSTRACT**

**Objective:** To evaluate myopic impact on thickness of nerve fiber layer of the retina in healthy myopic subjects.

**Study Design:** Prospective Observational study.

**Place and Duration:** Investigative Department of Ophthalmology of Al-Ibrahim Eye Hospital, Karachi from 1st May 2018 to 30th October 2018.

**Methodology:** In this study 80 eyes of myopic subjects (SE -0.5 to -11.0 DS) were enrolled. Each eye underwent through comprehensive ocular examination beginning with visual acuity, refraction, fundoscopy by slit lamp and ending up to optical coherence tomography of Nidek. Mean average peripapillary thickness of nerve fiber layer and thickness in superior, inferior, nasal and temporal quadrants was taken into consideration, calculated by Spectral Domain Optical Coherence Tomography (version 1.5.5.0).

**Results**: Forty subjects volunteered for study protocol among which 21 were male and 19 were female with a degree of refractive breakdown of 30% mild myopic, 50% moderately myopic and 20% highly myopic. The calculated average age was 25.0 ± 5.0 years (range 16-40 years). The average total nerve fiber layer thickness in myopic respondents was 90.85µm; superiorly 112.37µm; inferiorly 117.52µm; temporally 71.85µm and in nasal quadrant was 61.55µm. Retinal nerve fiber layer thickness was statistically significant in superior and temporal quadrant. In high myopes thickness was clinically significant in inferior quadrant in terms of quantity as compared to mild and moderate myopia

**Conclusion:** Average retinal nerve fiber layer thickness was significantly decreased in high myopia as compared to mild myopia while moderate group had slightly thicker thickness than high myopic group. Hence impact of dioptric power on nerve fiber layer thickness in myopic patients is significant.

## Keywords: Myopia, RNFL thickness, Optical coherrence tomography, Superior quadrant, Temporal quadrant.

**How to Cite This:**

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