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Assessment of Central Choroidal Thickness Changes using Enhanced Depth OCT after Treatment of Diabetic Macular Edema with Intravitreal Ranibizumab Correlation: Central Macular Thickness and Best Corrected Visual Acuity

Aim: To assess the effect of Intravitreal Injection (IVI) of Ranibizumab on Central Choroidal Thickness (CCT) using Enhanced Depth Imaging Optical Coherence Tomography (EDI-OCT) and its correlation with Central Macular Thickness (CMT) and Best Corrected Visual Acuity (BCVA) in eyes with center involving diabetic macular edema.

Materials and methods: Prospective interventional study including 60 eyes with center involving diabetic macular edema which will receive three consecutive monthly IVI of Ranibizumab.

Results: Baseline CCT decreased from 256 μ m-432 μ m (Mean 322.1 ± 63.17 SD) to 227 μ m-303 μ m (Mean 271.6 ± 26.53 SD). Baseline CMT decreased from 401 μ m-718 μ m (Mean 526.45 ± 99.63 SD) to 248 μ m-444 μ m (Mean 382.85 ± 119.66 SD). Baseline BCVA improved from 0.4-1.0 logMAR (Mean 0.83 ± 0.22 SD) to 0.1-1.0 logMAR (Mean 0.45 ± 0.29 SD). We found a non-significant correlation between the percent reduction in CCT and the percent reduction in CMT as well as the percent improvement in BCVA over the entire study. However a statistically significant positive correlation was found between the percent reduction in CMT and the percent improvement in BCVA over the entire study. **Conclusion:** IVI of Ranibizumab in the treatment of center involving diabetic macular edema results in reduction of the permeability of the choroidal blood vessels as well as the Sub-Foveal Choroidal Thickness (SFCT). However we could not establish a statistically significant correlation between the percent reduction in CCT, the percent reduction in CMT and the percent improvement in BCVA.