00565 Influence of Axial Length Greater Than 30 mm on Myopic Maculopathy in a Cohort of Highly Myopic Eyes

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Aims: To determine if highly myopic (HM) eyes with axial length (AL) > 30mm have a higher prevalence of myopic maculopathy than HM eyes with AL less than 30 mm

Methodology: HM patients (<-6.00 D and/or >25 mm axial length (AL) in at least 1 eye) clinically diagnosed with staphyloma, recruited from a HM clinic between 1/2017-10/2017, were evaluated retrospectively. The following was performed for all patients: dilated retinal exam, IOLMaster axial length (AL) measurement, fundus photography/auto fluorescence and wide-field sweptsource optical coherence tomography (SSOCT). Only right eyes were examined and the cohort was stratified into eyes with > 30mm and those between 25 and 30 mm in AL.

Result: The right eyes of 316 HM patients (69% female, 62 ±14 years old, range 19-92) were evaluated. AL was 29.5 ±2.2 mm (25.3-35.2mm). Using the Meta-analysis of Pathologic Myopia (Meta-PM) classification to assess the degree of myopic macular degeneration (MMD), the severit y of MMDwas higher in the longer AL group than the shorter AL group with 36%, 45%, 12%, and 7% of eyes in MMD Category 1, 2, 3 and 4 respectively in the short AL group versus 2%, 46%, 31% and 21% in the long AL group. The longer AL group was found to have significantly higher prevalence of: foveoschisis (Chi-square statistic 6.00, p= 0.018), past or present lamellar or full-thickness macular hole (5.5068, p= 0.019), vitreomacular traction (10.6594, p= 0.0011), dome-shaped macula (13.252, p< 0.0001), epiretinal membrane (17.4044, p< 0.0001) and myopic choroidal neovascularization (5.3921, p= 0.0202).

Conclusion: We have established, using wide-field imaging, that HM with AL > 30mm have a higher prevalence of various vision-threatening myopic macular pathologies as compared to HM eyes < 30mm. This is consistent with the idea that longer eyes are at greater risk of vision loss from HM.