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The choroidal profile in a sample of young Caucasian affected by myopia

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Purpose: To investigate the morphological characteristics of highly myopic eyes through analysing the macular choroidal thickness with respect to the axial length.

Methods: A cross-sectional study of patients with high myopia was performed in which the axial length in all patients was measured using Biometry (interferometry laser), and the macular area choroidal thickness was measured using optical coherence tomography. The correlation between the two measurements was analysed.

Results: A total of 281 eyes with pathological myopia were included, with a spherical equivalent between -6.00 and -21.00 diopters with an average of 9.41 ± 1.722 SD, and average age was 43.43 ± 13.59 years. The average central choroidal thickness was 138.00 ± 40.78 μm . The choroidal thickness was directly correlated with visual acuity ($r = 0.327$, $p = 0.001$) and significantly inversely correlated with axial length ($r = -0.236$, $p = 0.025$), sphere value ($r = -0.469$; $p < 0.001$) and age ($r = -0.426$; $p < 0.001$).

Conclusions: The macular choroidal thickness is significantly reduced in patients with pathological myopia, and its value depends on location, spherical equivalent, and age. The axial length in highly near-sighted individuals is inversely correlated with the choroidal thickness. The choroidal thickness in highly near-sighted patients can provide important information on this pathology, as it is highly correlated with functional parameters, age, and spherical equivalent.

Biography

Ahmad Zaben received his Bachelor's degree in Optometry (1989) at Universitat Politècnica de Catalunya (UPC), and the first MSc degree in Science of Vision and Optometry (2002) at the Universitat Politècnica de Catalunya (UPC), and the second MSc degree in Visual Rehabilitation (2012) at Universidad de Valladolid (UVA) / Medicine Faculty, and a PhD degree in Science of Vision and Optometry (2015) at Universidad Europea de Madrid. He is currently employed as full-time optometrist at the Department of Low Vision of Optipunt Eye Clinic and a general administrator. He attended a Corporate Program for Management Development/Advanced Program for Optics Management in ESADE Business School in Barcelona (2011).

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