

Analysis of Age-Related Choroidal Layers Thinning in Healthy Eyes Using Swept-Source Optical Coherence Tomography.

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Purpose

To study the changes in the choroidal layers thickness with age in a healthy population using swept-source optical coherence tomography.

Methods

Retrospective data analysis of a subgroup of eyes from a previous single-center, prospective, cross-sectional, noninterventional study. One hundred and sixty-nine healthy eyes were evaluated using swept-source optical coherence tomography. Inclusion criteria were best-corrected visual acuity between 20/20 and 20/25, spherical equivalent between ± 3 diopters, and no systemic or ocular diseases. Two independent investigators determined the macular horizontal choroidal thickness (CT) and the Haller's layer thickness across a 9 mm line centered at the fovea. Subjects were divided into five age groups.

Results

Mean subfoveal choroidal thickness was 305.76 ± 80.59 mm (95% confidence interval: 294.85–319.33). Mean subfoveal thickness for Haller's layer was 215.47 ± 67.70 mm (95% confidence interval: 207.30–227.86) and mean subfoveal thickness for choriocapillaris plus Sattler's layer was 87.31 ± 40.40 mm (95% confidence interval: 83.38–95.65). No significant differences were found due to gender. Choroidal thickness profile was similar between groups with choroidal thickness and Haller's layer thickness decreasing with age ($P = 0.002$).

Conclusions

Choroidal and Haller's layer thickness profiles are similar between different age groups. Age-related choroidal thinning is mostly at the expense of Haller's layer.

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