Electronic supplementary information

The multiple linear regression model of ciliary muscle parameters

The standardized regression equation of the change in ciliary muscle thickness at 1 mm from the scleral spur (CMT1) after atropine treatment (ΔCMT1) was ΔCMT1 = -0.495 × CMT1 + 0.348 x spherical equivalent (SE) + 0.455 ($F = 11.05$, $p < 0.001$), of which CMT1 and SE were included as variables. The regression coefficient of CMT1 was -0.451 (-0.681, -0.221), of which the p-value was < 0.001. The regression coefficient of SE was 0.016 (0.004, 0.027), and the p-value was 0.008. Sex, age, subfoveal choroidal thickness (CT), and parafoveal CT were excluded in the equation (all $p > 0.05$) (shown in Figure S1a-f).

The standardized regression equation of the change in ciliary muscle thickness at 2 mm from the scleral spur (CMT2) after atropine treatment (ΔCMT2) was ΔCMT2 = -0.541 × CMT2 + 0.270 ($F = 17.81$, $p < 0.001$), of which CMT2 was included as a variable. The regression coefficient of CMT2 was -0.420 (-0.621, -0.219), of which the p-value was < 0.001. Sex, age, subfoveal CT, parafoveal CT, and SE did not enter the equation (all $p > 0.05$) (shown in Figure S1b).

The standardized regression equation of the change in ciliary muscle thickness at 3 mm from the scleral spur (CMT3) after atropine treatment (ΔCMT3) was ΔCMT3 = -0.529 × CMT3 + 0.148 ($F = 16.28$, $p < 0.001$), of which CMT3 was included as a variable. The regression coefficient of CMT3 was -0.483 (-0.725, -0.242), of which the p-value was < 0.001. Sex, age, subfoveal CT, parafoveal CT, and SE did not enter the equation (all $p > 0.05$) (shown in Figure S1c).

The standardized regression equation of the change in maximum ciliary muscle thickness (CMTmax) after atropine treatment (ΔCMTmax) was ΔCMTmax = -0.459 × CMTmax + 0.453 ($F = 11.46$, $p = 0.002$), of which CMTmax was included as a variable. The regression coefficient of CMTmax was -0.416 (-0.664, -0.168), with a p-value of 0.002. Sex, age, subfoveal CT, parafoveal CT, and SE did not enter the equation (all $p > 0.05$) (shown in Figure S1d).

The standardized regression equation of the change in the tangent length from the ciliary muscle apex to the scleral spur (CMAL) after atropine treatment (ΔCMAL) was $\Delta CMAL = -0.576 \times CMAL - 0.320 \times SE + 0.656$ ($F = 10.22$, $p < 0.001$), of which CMAL and SE were included as variables. The regression coefficient of CMAL was -0.652 (-0.956, -0.349), and the p-value was < 0.001. The regression coefficient of SE was -0.023 (-0.043, -0.004), with a p-value of 0.021. Sex, age, subfoveal CT, and parafoveal CT were excluded in the equation (all $p > 0.05$) (shown in Figure S1e-g).