Assessments of anterior chamber aqueous flare in patients with pseudoexfoliation syndrome

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Purpose: To evaluate anterior chamber aqueous flare (ACAF) in subjects with pseudoexfoliation (PEX) syndrome.

Methods: The study included 124 eyes from 62 consecutive patients divided into the 2 following groups: group 1 (pseudoexfoliation glaucoma, [PEXG]) and group 2 (normotensive individuals with PEX syndrome). The study also included 32 age-matched control patients. All patients underwent complete ophthalmic examination with evaluation of intraocular pressure and cup/disc ratio. The ACAF was measured with laser flare photometry.

Results: ACAF values in PEXG eyes ranged from 8.66 photon counts/ms to 57.13 photon counts/ms (mean ± SD, 23.57 ± 12.80 photon counts/ms; 95% confidence interval [CI]). In PEX syndrome eyes and control group, values were between 1.00 photon counts/ms and 24.6 photon counts/ms (mean ± SD, 14.05 ± 5.93 photon counts/ms; 95% confidence interval [CI]), and 5.80 photon count/ms and 12.80 photon count/ms (mean ± SD, 8.61 ± 1.87; 95% confidence interval [CI]), respectively. ACAF was significantly higher in PEXG group compared to PEX syndrome group (p = 0.046). There was no correlation between the ACAF and the cup/disc ratio in patients with PEXG.

Conclusions: Laser flare photometry is a fast, noninvasive, and quantitative method to evaluate the increase in aqueous flare intensity. A high ACAF value might be a predictor of the development of glaucoma in patients with PEX syndrome.