**PURPOSE**

Pseudoexfoliation syndrome (PEX) is characterized by the deposition of an abnormal extracellular fibrillar material on many ocular and extracranial tissues. Alterations of the blood-aqueous barrier (BAB) in PEX have been shown using various methods including iris angiography, laser flare photometry (LFP), and biochemical analysis of the aqueous humor. [1, 2] The aim of this study was to compare the anterior chamber aqueous flare (ACAF) in patients with pseudoexfoliation glaucoma (PEXG) to normotensive individuals with or without PEX.

**METHODS**

This prospective study included 62 consecutive patients divided into the 2 following groups: group 1 (PEXG) with 36 patients and group 2 (normotensive individuals with PEX) with 26 patients. A control group of 32 healthy sex- and age-matched subjects was included. Patients with previously intraocular surgery and history of uveitis or ocular trauma were excluded. All patients underwent complete ophthalmic examination with evaluation of intraocular pressure (IOP) and cup/disc ratio.

Diagnosis of PEX was based upon the biomicroscopic exam with normal IOP. Diagnosis of PEXG was based on the presence of PEX with ocular hypertension and glaucomatous optic damage. The ACAF was measured with LFP (FM-500, KOWA).

**RESULTS**

Demographic data of patients and mean ACAF values in different groups are listed in table 1. IOP in patients with PEXG varied from 28 to 40 mmHg and cup/disc ratio ranged from 0.6 to 0.9. The PEX group was associated with significantly higher ACAF compared to PEX group (p=0.046). Similarly, PEXG group was associated with significantly higher ACAF than in normal control group (p=0.048) (figure 1). However, there was no correlation between the ACAF and the cup/disc ratio in patients with PEXG.

**COMMENTS AND CONCLUSIONS**

- Our findings showed clearly that aqueous protein concentration, as determined by LFP, is significantly higher in eyes with PEXG than in eyes with PEX without ocular hypertension as well in eyes with PEX than in normal eyes. The breakdown of the BAB in eyes with PEX has been reported in many studies. [1-4] Therefore greater degrees of inflammation are recorded after either cataract or glaucoma surgery in PEX, with higher risks of inflammation-related complications. [5, 6]
- Previous studies have not shown a significant difference between eyes with PEX without ocular hypertension and eyes with PEXG. [1-3] While, our results suggest that the breakdown of the BAB in PEX is more important in eyes with glaucoma.
- Laser flare photometry is a non invasive and accurate quantitative method to evaluate ACAF variations, and may be useful to assess patients with PEX.
- A high ACAF value may be a predictor of the development of glaucoma in patients with PEX. However further investigation is warranted to validate this hypothesis.

**REFERENCES**