

## SUMMARY

**Purpose:** To investigate the involvement of ophtalmic artery and carotid system in patients with glaucoma associated pseudoexfoliation syndrome by ultrasonography .

**Material and methods:** Intima-media and total wall thickness of common carotid arteries; peak systolic, end diastolic flow values and resistivity indices of ophtalmic, common carotid artery and intimal carotid artery were determined by Doppler ultrasonography in 30 pseudoexfoliation glaucoma patients and 22 age matched healthy subjects. ROC analyses was performed to define the best cut off values.

**Results:** Intima-media thicknesses of common carotid artery were relatively higher in patients with glaucoma. Decrease peak systolic flow rate, end diastolic velocity and increase of RI values of ophtalmic artery were observed. Statistically significant decrease of end diastolic velocity and increase of RI values in patient group were found for common carotid artery measurements. When a 0.71 cut off value of RI was taken for ophtalmic artery, 72% sensitivity, 90 % spesificity were obtained for distinguishing pseudoexfoliation glaucoma. Similarly, 0.72 cut off value of RI led to 90 % sensitivity and 73 % spesifity for common carotid artery.

**Conclusion:** The results such as wall thickness of common carotid artery, decrease of flow rate and increase of RI for ophtalmic and common carotid artery support the hypothesis of that pseudoexfoliation is a systemic syndrome. Cut off RI values of 0.72 may be useful in the diagnosis and follow up with pseudoexfoliation glaucoma.

**Keywords:** pseudoexfoliation, glaucoma, Doppler, orbit, carotid artery