Impaired saccadic eye movement in primary open-angle glaucoma

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PURPOSE: Our study aimed at investigating the extent to which saccadic eye movements are disrupted in patients with primary open-angle glaucoma (POAG). This approach followed upon the discovery of differences in the eye-movement behavior of POAG patients during the exploration of complex visual scenes.

METHODS: The eye movements of 8 POAG patients and 4 healthy age-matched controls were recorded. Four of the patients had documented visual field scotoma, and 4 had no identifiable scotoma on visual field testing. The eye movements were monitored as the observers watched static and kinetic targets. The gain, latency, and velocity-peak latency of the saccades recorded were then analyzed. RESULTS: In POAG patients, with abnormal visual fields, watching a static target, the saccades were delayed and their accuracy was reduced, compared with those of normal observers. In POAG patients, with normal and abnormal visual fields, watching a kinetic target, a task involving precise motion analysis, the latency and accuracy of the saccades were impaired, compared with those of normal observers.

CONCLUSIONS: Our findings suggest that POAG alters saccade programming and execution particularly in the case of moving targets.
Liens

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