Visual Field Outcomes from the Multicenter, Randomized Controlled Laser in Glaucoma and Ocular Hypertension Trial

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PURPOSE: To compare visual field outcomes of ocular hypertensive and glaucoma patients treated first with medical therapy with those treated first with selective laser trabeculoplasty (SLT).

DESIGN: Secondary analysis of patients from the Laser in Glaucoma and Ocular Hypertension study, a multicenter randomized controlled trial.

PARTICIPANTS: Three hundred forty-four patients (588 eyes) treated first with medical therapy and 344 patients (590 eyes) treated first with SLT.

METHODS: Visual fields (VFs) were measured using standard automated perimetry and arranged in series (median length and duration, 9 VFs over 48 months). Hierarchical linear models were used to estimate pointwise VF progression rates, which were then averaged to produce a global progression estimate for each eye. Proportions of points and patients in each treatment group with fast (MAIN OUTCOME MEASURES: Pointwise and global progression rates of total deviation (TD) and pattern deviation (PD).

RESULTS: A greater proportion of eyes underwent moderate or fast TD progression in the medical therapy group compared with the SLT group (26.2% vs. 16.9%; risk ratio http://RR, 1.55; 95% confidence interval http://CI, 1.23-1.93; P CONCLUSIONS: A slightly larger proportion of ocular hypertensive and glaucoma patients treated first with medical therapy underwent rapid VF progression compared with those treated first with SLT.

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