Glaucoma Research Society

LOW-TENSION GLAUCOMA TREATMENT STUDY (LoGTS): BASELINE CLINICAL CHARACTERISTICS

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Purpose: To report baseline characteristics of LoGTS: a multicenter, double-masked, study comparing the effect of brimonidine versus timolol on visual field stability in patients with low-pressure glaucoma (untreated IOP ? 21 mmHg on a modified diurnal curve).

Design: Multicenter randomized controlled trial – baseline characteristics of study subjects

Participants: 190 patients with low-pressure glaucoma

Methods/testing: Baseline clinical characteristics were analyzed for subjects randomized in the LoGTS.

Results: Mean age was 64.9 ± 10.7 (± S.D.) yrs (range 37 to 86 yrs) with 22 (12%) patients under age 50. 60% of the subjects were female. Racial distribution was White 137, Black 26, Asian 13, and Hispanic 14. Family history of high-pressure glaucoma was present in 58 (30%) subjects and of low-pressure glaucoma in 7 (4%) subjects. The frequency of systemic vascular conditions was as follows: hypertension 44%, diabetes mellitus 13%, systolic pressure < 110 mmHg 9%, diastolic pressure < 70 mmHg 18%, hypotensive episode 2%, migraine history 5%, Raynauds phenomenon = 8%. Unilateral achromatic visual field loss was present in 52 (27%) subjects (31 left eyes). Bilateral field loss cases were older (66 vs 62 yrs, $p < .05$) although mean untreated diurnal IOPs were similar between the eyes of the bilateral and unilateral cases (15.6 vs 15.2 mmHg). Mean deviation for all eyes with field loss was -5.7 ± 4.1 db. Mean central corneal thickness in phakic eyes (543 ± 35μ, range 435 to 655) was < 500μ 15 patients (diurnal IOP 13 mmHg) and > 600μ in 11 patients (diurnal IOP 16 mmHg). Mean vertical cup-to-disc ratio for all eyes was 0.67 ± 0.15. Unilateral subjects had a larger ratio (0.75 ± 0.12) in the involved than the fellow non-involved eye (0.60 ± 0.17, $p < .0001$). A disc hemorrhage was present at the time of study entry in 36 subjects (39 eyes): 32 bilateral and 4 unilateral subjects.

Conclusion: We were able to successfully enroll a large number of subjects with low-pressure glaucoma in this ongoing clinical trial.

Updated: March 11, 2008 12:55 PM AST