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Abstract Information

Abstract Title:

DISC HEMORRHAGE IN THE LOW-PRESSURE GLAUCOMA TREATMENT STUDY

Purpose:

To report the relationship of disc hemorrhage (DH) and baseline ocular and non-ocular parameters in the Low-pressure Glaucoma Treatment Study (LoGTS).

Design:

Multi-center, prospective, randomized clinical trial

Participants:

190 patients (380 eyes) with low-pressure glaucoma

Main Outcome Measures:

Visual function, intraocular pressure, and central corneal thickness

Methods:

LoGTS is a randomized, double-masked trial designed to compare visual field (VF) stability in patients randomized to topical twice-daily brimonidine tartrate 0.2% versus twice-daily timolol maleate 0.5%. Low pressure glaucoma was defined as open angle glaucoma with a glaucomatous VF defect in at least one eye on Humphrey 24-2 full-threshold standard automatic perimetry and all IOP measurements < 22 mmHg. Baseline measurements included untreated diurnal IOP curve (8 am, 10 am, 12 pm, and 4 pm), central corneal thickness (CCT), and stereophotography. Annual disc photographs were assessed for DH by three masked observers. A "DH event" was defined as the presence of one or more DH on a single annual, evaluable photograph. The relationship of ocular and non-ocular baseline parameters in the DH and non-DH groups was assessed.

Results:

Mean patient age was  $64.9 \pm 10.7$  yrs and average VF mean deviation (MD) was  $-5.7 \pm 4.1$  dB. 1126 disc photographs (198 baseline and 828 follow-up) were reviewed. Sixty DH events (28 eyes, 1 DH; 10 eyes, 2 DH; 4 eyes, 3 DH) were observed in 42 eyes (11.1%) of 35 patients (13.2%). DH eyes and non-DH eyes

were similar with respect to age ( $p=0.6$ ), peak IOP ( $p=0.9$ ), diurnal fluctuation ( $p=0.1$ ), mean diurnal IOP ( $p=0.6$ ), baseline MD ( $p=0.3$ ) and CCT ( $p=0.9$ ). DH was more common in women ( $p=0.001$ ).

**Conclusion:**

DH was common in the LoGTS study and was unrelated to baseline ocular and non-ocular parameters. A higher frequency of DH was observed in women.