



CANADIAN GLAUCOMA STUDY - STUDY DESCRIPTION, BASELINE CHARACTERISTICS AND PRELIMINARY RESULTS

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Purpose: To characterize the risk factors associated with the progression of open-angle glaucoma.

Design: Multi-center prospective observational and interventional study, with one eye randomized to inclusion

Participants: Patients at five Canadian Glaucoma Centers recruited since 1994

Testing/Methods: Inclusion criteria mandate visual acuity $> 6/10$, early glaucomatous field loss (Mean Deviation [MD] better than -10 dB) and documented, defined, optic disc changes. Baseline characteristics recorded include demographic information, MD value, untreated and study baseline IOP, an objective test for susceptibility to vasospasm, and hematological, biochemical and rheological profiles. Patients are followed at 4-month intervals with conventional automated perimetry, short wavelength automated perimetry and scanning laser tomography in one eye, randomized to the study.

Main Outcome Measure/Intervention: Progressive event, defined with conventional perimetry to be followed by IOP reduction of 20% via standard protocol, with continued follow-up.

Results: A total of 258 patients (131 men and 127 women) whose median age was 66.0 years were recruited in 5 centers. At baseline 48.8% of the patients had visual acuity of $> 6/6$, while 88.8% had $> 6/7.5$. The median MD (mean of two baseline examinations) was -4.0 dB and 62% of patients had a MD better than -5.0 dB. Median untreated IOP was 25.0 mm Hg and 21.8% had untreated IOP < 22 mm Hg while the median baseline IOP was 18.0 mm Hg and 49.8% had baseline IOP < 17 mmHg. As of March 2002, there were 181 patients still in the study whose median (25th and 75th percentiles) follow-up was 52 (40, 64) months while the respective figures for the whole sample were 48 (32, 60) months. The cumulative attrition rate during 0-20 months of follow-up was 15.9%, while that during 20-60 months was 14.5%. The cumulative progression rate was 20.43% (approx. 4.1%/yr) and not significantly different among centers.

Conclusions: The Canadian Glaucoma Study is a multi-center study which will characterize risk factors in addition to IOP for the progression of glaucoma. The data suggest that the attrition rate will remain low providing a range of data on a large number of patients followed closely under a standardized treatment protocol over a number of years.

