



## LONG-TERM OUTCOMES IN ASIANS AFTER ACUTE ANGLE-CLOSURE

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**Purpose:** To determine the long-term outcome of eyes suffering an acute attack of angle-closure (AAC) and to identify risk factors at presentation associated with loss of visual function.

**Design:** Retrospective cohort study

**Participants:** 90 individuals who had prior acute angle-closure attacks documented at two Singapore hospitals, two to nine years previously.

**Methods/Testing:** Visual acuity, visual field testing, dilated eye examination and optic nerve head photography were performed on all subjects. The optic discs were judged clinically as to whether there was glaucomatous optic neuropathy present, and visual fields assessed if there was glaucomatous visual field loss. All visual fields and optic nerve photographs underwent a second evaluation by an experienced but masked glaucoma specialist, who assessed if the changes were compatible with glaucoma. Blindness was defined as best corrected visual acuity which was worse than 6/60, and/or central visual field of less than 20 degrees in the study eye.

**Main Outcome Measures:** Blindness by our definition and other causes of vision loss besides glaucoma.

**Results:** A total of 90 of 170 eligible subjects (65.2%) were examined. All subjects were Asian, predominantly Chinese (78 subjects-86.7%). There were 61 females (67.8%) and 29 males (32.2%). The mean age of subjects was 62.0 (SD 9.0) years at the time of the attack with a mean duration of 6.3 (SD 1.5) years from the time of the AAC episode to the study examination. Sixteen (17.8%) subjects were blind in the attack eye, half of the cases of blindness caused by glaucoma. Forty-three subjects (47.8%) had glaucoma with 13 eyes (15.5%) having markedly cupped optic discs (CDR > 0.9). Thirty-eight eyes (58%) had best-corrected vision < 6/9, with cataract responsible for close to half the cases of vision loss. There were no identifiable risk factors related to the AAC episode that was significant for visual outcome.

**Conclusions:** Several years after presenting with AAC, 17.8% of subjects examined were blind in the attack eye, and almost half had glaucomatous optic nerve damage. Vision was also reduced in a large number of individuals, largely from un-operated cataract.

