Combining phacoemulsification with endoscopic cyclophotocoagulation to manage cataract and glaucoma

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ABSTRACT

Background: To examine the outcome and complications of combined phacoemulsification and endoscopic cyclophotocoagulation as surgical management of cataract and glaucoma.

Design: Retrospective uncontrolled case series from the glaucoma unit, Western Eye Hospital, London, UK.

Participants: Sixty-three eyes from 59 patients with coexisting cataract and glaucoma.

Methods: Patients underwent routine phacoemulsification followed by 270-360 degree endoscopic cyclophotocoagulation as a single procedure.

Main Outcome Measures: Intraocular pressure, number of intraocular pressure-lowering medications, logMAR visual acuity, recorded complications.

Results: Baseline characteristics included mean age (77.3 ± 11.1 years), mean logMAR visual acuity (1.01 ± 0.98), mean intraocular pressure (21.13 ± 6.21 mmHg) and mean number of intraocular pressure-lowering medications, (2.71 ± 1.06). Twelve months after phacoemulsification and endoscopic cyclophotocoagulation, mean intraocular pressure had reduced to 16.09 ± 5.27 mmHg (P < 0.01), number of intraocular pressure-lowering medications reduced to 1.47 ± 1.30 (P < 0.01) and mean logMAR acuity improved to 0.33 ± 0.22 (P < 0.01). Success, defined as an intraocular pressure reduction > 20% with intraocular pressure 6-21 mmHg, was achieved in 55.5% of eyes at 12 months. Complications included fibrinous uveitis, elevated intraocular pressure, posterior vitreous detachment and induced astigmatism.

Conclusion: Phacoemulsification and endoscopic cyclophotocoagulation is both safe and effective as surgical management for cataract and glaucoma. Larger intraocular pressure reductions can be achieved in older patients and those with higher baseline intraocular pressure.