Clinical profile, investigation and management of 87 eyes diagnosed with malignant glaucoma
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Purpose: To describe the clinical presentation, ultrasound biomicroscopic features and management of eyes identified with malignant glaucoma.

Methods: Retrospective review of 85 patients (94 eyes), diagnosed with malignant glaucoma between January 1995 and December 2010 was performed. Malignant glaucoma was defined as a shallow/flat anterior chamber in the presence of a patent iridotomy ± raised intraocular pressure (IOP). Exclusion criteria were other causes of secondary angle closure and follow up of < 2 months. All patients were treated with aqueous suppressants, cycloplegics and topical/systemic steroids. Laser/surgical treatment were done when medical treatment failed.

Results: 85 patients (94 eyes) were identified with malignant glaucoma. 7 lost to followMup were excluded from the final analysis. Median Age: 51 years (14M80).M:F; 34:53. Diagnosis of glaucoma preceding the event included PACG in 80 eyes (91.95%), nanophthalmos in 2 (2.29%), POAG in 3 (3.4%) and pseudoexfoliation in 2 (2.29%). Ultrasound biomicroscopy was used to confirm the diagnosis in 64 eyes (73%). Anterior rotation of the ciliary body was seen in 62 (71.26%) eyes; lens corneal touch in 39 (44.82%) eyes. Mean intraocular pressure (IOP) at presentation was 32 ± 14.7 mmHg (16M68). Surgeries preceding the event included filtering surgery in 74 eyes (85.05%). Mean duration from previous surgery was 195 days (1 day to 7 years). 15 eyes (17.1%) eyes resolved with medical treatment; 9 eyes (10.34%) underwent laser treatment in addition (more than one modality was necessary in some cases) (YAG hyaloidotomy in 10 eyes, Diode cyclophotocoagulation in 5 eyes), Re YAG laser iridotomy in 6 eyes. Surgical procedures included pars plana vitrectomy with anterior chamber reformation in 48 eyes (55%), lensenuction with anterior vitrectomy in 12 eyes (13.79%) and lens removal alone in 2 eyes (2.29%). Mean follow-up; 34.84 ± 34.69 (6 weeks - 133 months). LogMAR visual acuity improved from 1.01 ± 0.71 at presentation to 0.81 ± 0.95, (p = 0.03); IOP (mmHg) reduced from 32.73 ± 13.54 to 14.01 ± 6.81 (p < 0.001) at the last visit. Complete success (improvement of visual acuity by ≥ 2 lines, IOP < 18 mmHg without medications and formed anterior chamber) was seen in 29 eyes (33%). Qualified success; ( IOP < 18 mmHg with medications) was seen in 14 eyes (16%). The rest were failures (44 eyes, 50.5%). Recurrences occurred in 11 eyes (12.64%) with use of miotics being a significant risk factor (p < 0.001). Treatment was more likely to fail in older patients (p < 0.001).

Conclusions: Patients with primary angle closure glaucoma were more prone to develop malignant glaucoma. Surgical treatment was required in the majority. Successful treatment was possible in < 50%. Treatment was more likely to fail in older patients. Recurrences were more common in those on topical miotic therapy.