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COMBINED PARS PLANA VITRECTOMY, PANRETINAL ENDOLASER, INTRAVITREAL ANTI-VEGF AND CYCLOPHOTOCOAGULATION IN NEOVASCULAR GLAUCOMA WITH VITREOUS HAEMORRHAGE- A RETROSPECTIVE INTERVENTIONAL CASE SERIES

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Neovascular glaucoma (NVG) is one of the most potentially blinding types of refractory glaucoma that poses a therapeutic challenge. Often, NVG patients present with concurrent posterior segment pathologies like vitreous haemorrhage, large fibrovascular proliferation, tractional retinal detachment posterior segment ischemic disease causes vitreous hemorrhage (VH), making treatment even more challenging.

The purpose of the study is to determine the safety and efficacy of an integrative anti-ischemic and intraocular pressure (IOP) lowering surgical intervention in patients of neovascular glaucoma (NVG) with vitreous hemorrhage.

This study included 11 eyes of 11 patients with NVG and VH. The eyes underwent transscleral cyclo photocoagulation (DLCP), pars plana vitrectomy, near-confluent pan-retinal endolaser, and intravitreal bevacizumab in the same sitting. Best corrected visual acuity (BCVA, logMAR), IOP (mmHg), number of glaucoma medications, need for repeat surgical interventions and complications were noted over a follow up period of 6 months.

Eleven eyes of 11 patients (10 Male, 1 Female, Mean age 57.25±5.9 years) were included. NVG underlying conditions included retinal vein occlusion (4 eyes) proliferative diabetic retinopathy (5 eyes) and vasculitis (2 eyes). At 6 months mean IOP decreased from 49.6 mmHg to 16.9 mmHg, glaucoma medication decreased from 6 to 3.27. Two eyes had hyphema at post operative day 1 both of which resolved on its own within a week. No eyes required repeat pars plana vitrectomy or laser augmentation. Two eyes underwent trabeculectomy due to uncontrolled IOP within 3 months of primary surgical intervention. Two eyes received repeat antiVEGF injection to tackle macular edema.

A single integrative surgery to control ischemia and IOP is useful and safe and is a potential consideration to be included in the treatment algorithm as an early intervention before proceeding to filtering surgery in NVG.