Initial Anatomic and Functional Outcome of Pars Plana Vitrectomy in Patients with Chronic Retinal Pathologies at the National Eye Centre, Kaduna

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Introduction: Primary anatomic success following pars plana vitrectomy (PPV) is related to surgeon's skills and experience, as well as the complexity of the associating pathology. Hence, primary anatomic success is positively correlated with good visual outcome.[1] However, patients with Proliferative vitreoretinopathy (PVR) grade C-1 and worse have been shown to have multiple surgical interventions and worse prognosis.[2]A safe period of 3-7 days has been reported as the time when retina repair will have no significant loss of vision postoperatively.[3]In Nigeria, increase in number of vitreoretinal surgeons has made retinal surgery services more available. The purpose of the study was to assess the initial outcome of pars plan Vitrectomy (PPV) in patients at National Eye Centre Kaduna.

Methods: The study was a retrospective case series where medical records of patients who underwent PPV with or with scleral buckling in May 2017 was retrospectively reviewed. The data retrieved include: age, sex, indications for surgery, pre/post op visual acuity (VA) among several others. The patients had PPV± sclera buckling, silicone oil and endo-laser based on clinical indication.

Results: A total of 9 patients had PPV over the period. About 44.4% eyes (4) were males. The average age of the patients was 40.3yrs. The major indications for the surgery were retinal detachments (77.8%), Epiretinal membrane (11.1%) and a subhyaloid haemorrhage (11.1%). Anatomical success was achieved in all operated eyes, while the mean LogMAR VA changed from of 1.138 pre-op to 1.60 one-week post- operatively.

Pre Op VS Post Op

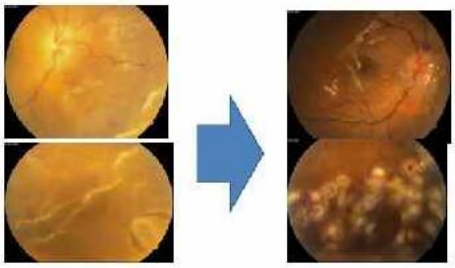

Fig. 1: Fundus photograph of a patient with rhegmatogenous retinal detachment and grade C PVR: preoperatively and postoperatively. Had silicone oil and endolaser.

Table 1: Comparison of duration of the disease with visual outcome and complications

Pre OP Duration of Symptoms	Diagnosis	Pre Op VA	Post OP BCVA	Complications
2 yrs	TRD + VH	6/36	6/18	Nil
2 yrs	TRD + VH	5/60	2/60	Nil
4 yrs	Inf RRD + PVR B	CF@ 1M	HM	Nil
1 month	Total RRD + PVR C	3/60	CF @ 1M	Nil
1 yr	Inf RRD	6/36	HM	Hypotony 8mmHg
1 yr	Total RD	HM	CF @ 1M	Nil
4 months	ERM + FTMH	6/60	3/60	Increased IOP 40mmHg
7 months	Total RRD + VH	PL	NPL	Phthisis, Hypotony 0mmHg
2 yrs	FVT + Sub Hyoid Haemorhage	6/60	CF @ 1M	Increased IOP 25mmHg

Key: *TRD – Tractional Retinal detachment, VH – Vitreous Haemorrhage, RRD – Rhegmatogenous Retinal Detachment, PVR – Proliferative Vitreoretinopathy, ERM – Epiretinal Membrane, FTMH – Full Thickness Macula Hole, FVT – FoveoVitreolar Traction*

Discussion: The visual outcome postoperatively showed one patient had BCVA 6/18 at 3 months following Pars plana vitrectomy and silicone oil. This patient had a pre-op VA of 6/36 whose indication for surgery was tractional retinal detachment with vitreous haemorrhage. Though the duration of symptoms was two years. The generalized visual profile of other patients was counting fingers (CF) at 1m to non-perception of light (NPL). This may be correlating with the duration of visual symptoms and pre-operative visual acuity as those with long standing retinal detachment had poor visual outcome post vitrectomy. Also, the patients with severe visual impairment are associated with poor visual outcome. This is consistent with the report of a larger retrospective series earlier reported by Oderinlo et al in Lagos.[1] Lack of adequate manpower for retinal surgeries may have contributed to the late presentation.

Conclusion: PPV in patients presenting with chronic and complicated retinal detachment could give immediate functional and anatomical success if cases are carefully selected. However, meaningful conclusion will be made on a long term after silicon oil removal.

References

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