Abstract 16

VITRECTOMY WITH INFERIOR RETINECTOMY VS. HEAVY SILICONE OIL(DENSIRON XTRA) IN THE MANAGEMENT OF INFERIOR RHEGMATOGENOUS RETINAL DETACHMENT WITH PROLIFERATIVE VITREORETINOPATHY

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To compare the anatomical and functional outcomes of pars plana vitrectomy (PPV) with heavy silicone(Densiron Xtra, HSO) versus PPV with inferior retinectomy in primary and recurrent retinal detachment(RD) cases with inferior retinal detachment(RD) and severe proliferative vitreoretinopathy (PVR).

A retrospective study was conducted over seven years, examining patients with primary and recurrent RD and inferior RD associated with PVR stage C1-3 in 45 eyes. Seventeen eyes underwent PPV and HSO(Densiron Xtra) tamponade while 28 eyes underwent PPV with inferior retinectomy 180 degree or greater and 1000cSt standard silicone oil tamponade. Internal limiting membrane (ILM) peeling was attempted in all cases. Three rows of 360-degree laser photocoagulation were applied to the retinectomy edges and the entire retina; in retinectomy cases, also was applied to the HSO group. The primary outcomes included anatomical and functional success, while secondary outcomes involved recurrence rates, secondary surgeries, and postoperative complications.

Primary anatomical success was 79.5% in the heavy silicone oil group and 85.7% in the inferior retinectomy group. Recurrence and secondary surgery occurred in 7 eyes (41%) in the HSO(DensironXtra) group and in 3 eyes (13%) in the retinectomy group. All recurrent cases in the Densiron Xtra group underwent inferior retinectomy due to recurrent retinal detachment. In the retinectomy group, recurrence was due to epiretinal membrane (ERM) formation rather than retinal detachment, and membrane peeling was performed. Final anatomical success was 95% in the retinectomy group and 90% in the Densiron Xtra group. Silicone oil removal was performed within 3–4 months. Final visual acuity was 0.6 in the retinectomy group and 0.4 in the HSO(Densiron Xtra) group. Intraocular pressure (IOP) was higher in the Densiron Xtra group compared to the retinectomy group. No cases of postoperative hypotony were observed in the retinectomy group. No significant differences were observed with regard to emulsification, or intraocular inflammation in both groups.

The recurrence rate(recurrent RD) and need for secondary surgery were higher in the HSO(Densiron Xtra) group than in the retinectomy group. Although the final anatomical success was similar between groups, the functional success was slightly better in the retinectomy group. Due to the lower recurrence rate, fewer secondary surgeries, and better final visual acuity, inferior retinectomy was found to be more effective and successful than HSO(Densiron Xtra) in the management of inferior retinal detachment with PVR. To our knowledge this is the first report comparing heavy silicone oil to retinectomy for inferior retinal detachment with PVR.