

Surgical Outcome of Heavy Silicone Oil in Rhegmatogenous Retinal Detachment

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Abstract : Objective: The purpose of this study is to evaluate the anatomical and visual outcomes associated with the use of heavy silicone oil (HSO) during pars plana vitrectomy (PPV) in patients with rhegmatogenous retinal detachment (RRD). Materials and methods: A Total of 66 eyes of 66 patients with RRD patients who underwent PPV with HSO from 2018-2023 were included in this retrospective study. Risk factors of surgical outcomes were also investigated. Results: The mean age of the recruited patients was 55.26 ± 13.05 years. The most common diagnosis was recurrent RRD, with 43 patients (65.15%), and the majority of these patients (81.39%) had a history of multiple vitreoretinal surgeries. Inferior breaks and PVR grade \leq C were present in 65.15% and 42.42% of cases, respectively. The mean duration of HSO tamponade was 7.77 ± 5.19 months. The retinal attachment rate after surgery was 71.21%, with a final attachment rate of 87.88%. The mean final VA was 1.62 ± 1.11 logMAR. 54.54% of patients could achieve a final visual acuity (VA) \geq 6/60. Multivariate analysis revealed that proliferative vitreoretinopathy (PVR) and multiple breaks were significantly associated with retinal redetachment, while initial good VA (\geq 6/60) was associated with good visual outcome (\geq 6/60). The most common complications were glaucoma (30.3%) and epimacular membrane (7.58%). Conclusion: The use of heavy silicone oil in pars plana vitrectomy for rhegmatogenous retinal detachment yields favorable anatomical and visual outcomes. Factors associated with retinal redetachment are proliferative vitreoretinopathy and multiple breaks. Good initial VA can predict good visual outcomes.

Keywords : rhegmatogenous retinal detachment, heavy silicone oil, surgical outcome, visual outcome, risk factors

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