

Early postvitrectomy diabetic vitreous hemorrhage: incidence and associated factors

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Purpose:

To evaluate early postvitrectomy hemorrhage incidence and factors associated with hemorrhage in diabetic patients.

Methods:

197 eyes with tractional retinal detachment and/or with vitreous or subhyaloid hemorrhage underwent pars plana vitrectomy between 2001 and 2003. Postvitrectomy vitreous hemorrhage incidences after one week, one, three and six months were obtained from patients medical records. Vitreous hemorrhage occurred in first month accepted as very early and from one month till six months early postvitrectomy hemorrhage. Differences between preoperative and postoperative hemorrhage incidence were analyzed with Wilcoxon signed ranks test and factors associated with hemorrhage were analyzed with Spearman nonparametric correlation test.

Results:

Mean patient age was 56.95 ± 13.15 years. Total 136 eyes of 197 had vitreous and/or subhyaloid hemorrhage preoperatively. Hemorrhage was found in 40 (total of 182), in 26 (total of 136), in 15 (total of 97) and in 7 (total of 61) eyes after one week, one, three and six months after surgery respectively. Decrease in hemorrhage incidence was statistically significant in all postoperative follow up time ($p \leq 0.0001$). Postoperative hemorrhages occurred in eyes having hemorrhage before surgery and vice versa. Active neovascularization ($p=0.051$), vitreous hemorrhage occurred during vitrectomy ($p=0.007$) and use of expanding gases ($p=0.01$) were associated with very early postvitrectomy vitreous hemorrhage. Silicone oil use is inversely associated with very early postvitrectomy vitreous hemorrhage ($p=0.002$), i.e. eyes filled with silicone oil have less very early postoperative hemorrhage incidence. The incidence of postvitrectomy vitreous hemorrhage was found to be low in eyes that underwent endolaser during surgery ($p=0.049$) at six months.

Conclusion:

Incidence of postvitrectomy vitreous hemorrhage is proportionally decreased with follow up time. Using silicone oil instead of expanding gases when necessary could decrease postvitrectomy hemorrhage incidence and performing endolaser during surgery could be useful in preventing hemorrhage for a long time.

Take-home message:

Using silicone oil instead of expanding gases and performing endolaser during surgery could prevent postvitrectomy vitreous hemorrhage.

