Late-onset ocular hypertension following pars plana vitrectomy
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**Purpose:** To evaluate late-onset open angle ocular hypertension (OHT) following uncomplicated pars plana vitrectomy (PPV).

**Methods:** This was a retrospective study, including 803 eyes of 793 patients with a follow-up duration of more than 6 months which underwent PPV with phacoemulsification and intraocular lens implantation at Nagata Eye Clinic between 2004 and 2011. All surgeries were performed by a single surgeon (HK). There were 397 males and 396 females. The diagnoses for PPV were as follows; 341 eyes with rhegmatogenous retinal detachment (RRD), 211 eyes with epiretinal membrane (ERM), 173 eyes with macular hole (MH), 33 eyes with vitreous hemorrhage (VH), 21 eyes with subretinal hematoma (SRH), 16 eyes with vitreomacular traction syndrome (VMT), 7 eyes with vitreous opacity (VO) and 1 eye with retinoschisis. The mean age was 63.3 ± 11.2 years. Exclusion criteria were as follows: preexisting glaucoma (suspect) and OHT, reason for secondary glaucoma, proliferative vireoretionopathy, proliferative diabetic retinopathy, use of silicone oil, history of more than two vitrectomy procedures. The late-onset OHT was defined as intraocular pressure (IOP) >21 mmHg which was observed after 2 months postoperatively on at least 2 postoperative visits with increased IOP > 4 mmHg compared with preoperative IOP. IOP was measured with Goldman applanation tonometry in all patients. Six hundred and two eyes underwent PPV combined with cataract surgery. In the remaining 201 eyes, which underwent PPV alone, there were 199 pseudophakic eyes and two phakic eyes.

**Results:** The mean follow-up duration was 4.0 ± 2.1 years. Of the 803 eyes, 38 (4.7%) eyes of 36 patients including 24 males and 12 females developed late-onset OHT. The mean age was 60.3 ± 9.7 years. The mean interval between PPV and the diagnosis of late-onset OHT was 2.8 ± 2.0 years (2-84 months). There were no significant differences in late-onset OHT development among the diagnoses for PPV (RRD 16 eyes, MH 11 eyes, ERM 8 eyes, VH 1 eye, VO 1 eye, SRH 1 eye).

**Conclusions:** Late-onset OHT may occur after uncomplicated PPV. Long-term IOP monitoring is necessary after PPV.