Table 1. p-values of paired t-tests comparing differences in IOP drop between subsequent measurement trials respective to each drug's effect on each eye

	8 am versus 12 noon	12 noon versus 4 pm	4 pm versus 8 pm
Xalatan® (OD)	0.183	0.319	0.006*
Xalatan® (OS)	0.519	0.023*	0.582
Generic (OD)	0.825	0.103	0.084
Generic (OS)	0.783	0.144	0.012*

OD indicates right eye; OS, left eye.
*The difference between these IOP measurements was statistically significant.

latanoprost in subjects with open-angle glaucoma (OAG).

We conducted a cross-over, single-centre masked three-month study with patients at the Eye Clinic of Lithuanian University of Health Sciences, Kaunas, Lithuania, with the Eugene and Marilyn Glick Eye Institute, Indiana University School of Medicine, Indianapolis, USA, serving as the double-blind reading centre. All patients signed an informed consent after explanation in accordance with the Declaration of Helsinki, and the study protocol was approved by both the clinical and reading centre Institutional Review Boards.

This study prospectively examined 35 OAG patients (30 females, 5 males, age 63.3 ± 8.9). We initially estimated our sample size on $n = 30$ individuals to allow for potential dropouts from recruitment phase (actual Flow cytometric analysis in *Lagenaria siceraria* (*Cucurbitaceae*) indicates correlation of genome size with usage types and growing elevation 35) to provide >82% power detect differences of 12% or larger in mean IOP among study groups. All patients had been taking Xalatan® for at least 4 weeks prior to the first study visit. IOP (both eyes, Goldmann Applanation Tonometer) was measured during office hours every four hours starting at 8 am for a total of four measurements in a single day. After this first day of measurement trials, all patients continued treatment with Xalatan® for another 4 weeks. They were then switched to the generic latanoprost (Latalux®, manufactured by Sanitas, AB in Lithuania) without a wash-out phase. After 4 weeks, all patients returned for IOP measurements at the same four time-points in a single day.

There were no significant differences between the IOP values measured for the two drugs at their respective four time-points ($p > 0.05$ at 8 am, 12 noon, 4 pm and 8 pm comparisons). However, as seen in Table 1, Xalatan® induced a statistically significant difference in IOP decline between subsequent measurement times twice, compared to once for generic latanoprost. Additionally, Xalatan® induced a significantly greater number of IOP reductions below 14 mmHg than generic latanoprost ($p = 0.013$). Drug tolerability, assessed at each visit, was equally good for Xalatan® and generic latanoprost.

In a similar 12-week study, Narayanaswamy et al. found that Xalatan® lowers IOP significantly more often than generic latanoprost does. Their results showed that 9 of 11 patients on Xalatan® had a > 30% decrease in their IOP levels after 12 weeks of treatment, whereas only 3 of 18 subjects receiving generic latanoprost treatment had their IOP lowered by >30% (Narayanaswamy et al. 2007).

Our study was limited in that it was not randomized, because all patients received the same regimen. Another limitation was the lack of a wash-out period between treatments; however, we believe this study still holds value, as switching from branded to generic drugs without a wash-out period often mimics clinical practice. Because IOP did not increase or significantly change 1 month after switching to the generic drug, these results are useful in illustrating the relative efficacies of branded versus generic latanoprost.

Our study's findings suggest that both Xalatan® and generic latanoprost may be equally effective at lowering IOP over the diurnal period after 4 weeks of treatment. However, a significantly greater number of IOP reductions below 14 mmHg occurred for patients treated with Xalatan® as compared to generic latanoprost. This finding may be clinically significant, as achieving a target IOP < 14 mmHg can help prevent progression in moderate to advanced glaucoma (Advanced Glaucoma Intervention Study 2000). Yet, only longitudinal studies performed over greater periods of time and with larger numbers of participants may provide insight into glaucoma progression differences in patients treated with brand name medications versus generic equivalents.

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How do vitrectomy parameters influence the results of rhegmatogenous retinal detachments repair? EVRS RD Study No. 3

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Dear Editor,

Utilization of pars plana vitrectomy (PPV) for rhegmatogenous retinal detachment (RRD) has expanded in the past decade mostly due to refinements in surgical techniques and modern equipment. Several reports have highlighted the benefits of smaller gauge intraocular instruments and higher cutting speeds. Surgeons can choose machine variables and generally seem to use their preferred system for PPV, relying on a vitrector equipped with either Venturi or peristaltic pumps. There is no detailed evidence comparing peristaltic and Venturi pump systems concerning anatomic success rates.

To compare the anatomic results when different vitrectomy machine parameters (gauge, pump and cutting speed) are applied in RRD repair, the European VitreoRetinal Society (EVRS) analysed the data gathered during the EVRS RD Study.

The Study includes outcome of 7678 cases of RRD operated on by 176 surgeons from 48 countries with at least 3-month follow-up. In this manuscript, we included cases that RD was treated by primary PPV and excluded cases that previous investigation had shown other independent factors influencing outcome (such as hypotony and choroidal detachment). From the collected data on 4976 cases of PPV, we evaluated preoperative clinical findings, vitrector gauge, aspiration pump type and cutting rate. Detailed methodology is available in the EVRS RD Study Reports Numbers 1 and 2 (Adelman et al. 2013a,b).

Twenty-four per cent of vitrectomies were performed using a flow control machine and 76% using a vacuum control machine. The initial distribution of PVR grades between groups was similar.

The primary outcome measure was the final anatomical failure rate. Operations were considered successful when the retina remained attached throughout the study period. 'Level 1' failure was determined as cases where the retina remained detached by the conclusion of the study. 'Level 2' failure was the percentage of eyes with remaining silicone oil. 'Level 3' failure was the percentage of cases with recurrence of retinal detachment.

Three vitrectomy machine parameters were associated with higher failure rate:

First, in univariate analysis, the 'Level 1' failure rate of procedures carried out with 20 Gauge instrumentation was higher than that of 23 Gauge ($p = 0.009$). After adjusting for the level of PVR, there was no statistically significant difference in the failure rates between 20G or 23G vitrectomy. This may be because surgeons performed 20 Gauge PPV in more complex cases where advanced PVR was present. Thus 20 Gauge was not an independent risk factor for failure.

Second, Venturi pump vitrectomy equipment was associated with a significantly (odds ratio = 2.9) higher Level 1 failure rate compared with peristaltic pump vitrectomy ($p = 0.006$)

Third, when used with Venturi pump systems, high-speed vitrectomy cutters resulted in a lower failure rate than low-speed cutters ($p = 0.014$; OR = 0.5). High-speed cutting is employed to decrease the risk of cutting the retina, but complete removal of adherent vitreous may be difficult.

These are statistical correlations and we would like to point out that overall, anatomical results with both systems are very satisfactory and the attachment rate is high.

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Ultra-WideField fluorescein angiography by oral administration of fluorescein

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Editor,

The Optos ultra-wide-field (UWF) imaging system (Optos Panoramic 200MA™, Optos PLC. Dunfermline, Scotland, UK) is a scanning laser ophthalmoscope that can image 200° of the retina in one frame. This system can also be used for fluorescein angiography (FA) with same wide angle of the retina. Recent studies have shown that ultra-wide-field fluorescein angiography (UWF-FA) is useful in evaluating the status of the peripheral retinal vascular system in various retinal disorders including uveitis, vein occlusions and diabetes (Manivannan et al. 2005; Spaide 2011).

However, various systemic and local complications have been reported after a conventional intravenous fluorescein injection including nausea, skin rash, itching and life-threatening anaphylactic shock. To avoid these complications, Oral FA (Kelley & Kincaid 1979; Hara et al. 1998; Garcia et al. 1999) has been proposed as an alternative to intravenous FA.

We present our findings with UWF-FA using the Optos system after an oral fluorescein administration.

This study was approved by the Institutional Ethics Committee of the Mie University Graduate School of Medicine (#2553), and an informed consent was obtained from all subjects