Washout Periods for Brimonidine 0.2% and Latanoprost 0.005%

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PURPOSE: To evaluate the intraocular pressure washout time after discontinuing brimonidine 0.2% twice daily and latanoprost 0.005% once every evening.

METHODS: We discontinued brimonidine or latanoprost in a masked fashion from primary open-angle glaucoma or ocular hypertensive patients. The intraocular pressure was measured twice weekly until patients returned to untreated baseline.

RESULTS: In 32 patients, the mean longest eye washout time for brimonidine (n = 15) was 3.3 ± 3.0 weeks and for latanoprost (n = 17) was 4.4 ± 3.2 weeks (P = .24). In all but one patient, brimonidine returned to baseline by 5 weeks and latanoprost returned by 8 weeks.

CONCLUSION: After discontinuing latanoprost or brimonidine, a wide variation exists in washout times among individuals, with latanoprost demonstrating a trend to a longer washout period. (Am J Ophthalmol 2001;131: 798–799. © 2001 by Elsevier Science Inc. All rights reserved.)

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THE WASHOUT TIMES FROM THE EYE OF AN OCULAR hypotensive medication after discontinuing its use may be important for several reasons. First, when substituting medications, a physician should know how long the previous medicine may last to assess the efficacy of the new product. Second, for clinical trials, it is important to know the washout period of a medication to determine when an untreated baseline should be measured. Unfortunately, little information is available generally on washout periods of medications.

This trial was part of a protocol that has been reported separately.[1] After exit from the previous trial, patients were discontinued from their masked study medication,

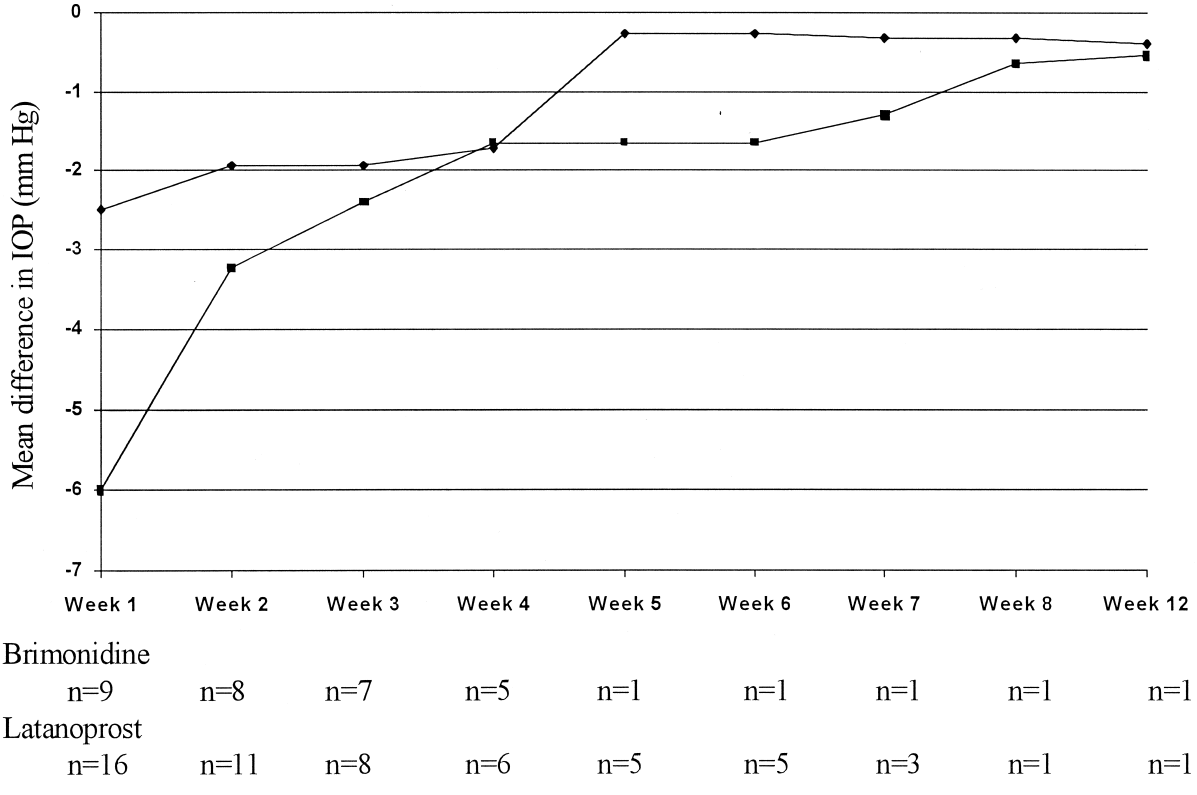

FIGURE 1. Average trough washout pressure from treated baseline after discontinuing latanoprost (squares) or brimonidine (diamonds). Once a subject returned to baseline, the pressure in the graph is recorded at 0 mm Hg at each subsequent visit. The "n" values show the number of subjects not returned to baseline for each time point. The graph includes the "longest eye" washout times only. The trough pressure decrease from baseline at Week 0 was 3.9 ± 2.4 mm Hg for brimonidine and 8.5 ± 4.3 mm Hg for latanoprost. IOP = intraocular pressure.

which was either brimonidine 0.2% twice daily or latanoprost 0.005% every evening. Patients were followed in a masked fashion with trough (8 AM) Goldmann applanation tonometry in both eyes twice weekly (approximately every 3 to 4 days), for up to 3 months, until the intraocular pressure returned to the 8 AM trough baseline (−1 mm Hg or above) in both eyes.

Of the 32 subjects in this trial, 15 were discontinued from brimonidine and 17 latanoprost. Ten patients had ocular hypertension, and 22 had primary open-angle glaucoma. Eleven subjects were white, and 22 were black; 16 were women and 16 were men. The average age was 60.3 ± 11.0 years.

The mean longest eye washout time for brimonidine was 3.3 ± 3.0 weeks, and for latanoprost was 4.4 ± 3.2 weeks ($P = .24$). The mean shorter eye washout time for brimonidine was 2.5 ± 1.8 weeks and for latanoprost was 3.1 ± 3.2 weeks ($P = .38$). By 3 weeks, approximately half of the patients in each group had reached baseline. The mean intraocular pressure had normalized by week 5 for brimonidine and week 8 for latanoprost, except one patient in each group who completed 3 months without returning to baseline. The average pressure decrease from baseline at each time point after discontinuation is shown in Figure 1. No adverse events were reported during the washout period.

In a previous study, Alm and associates indicated that latanoprost still retained an ocular hypotensive effect 2 weeks after discontinuation of the medicine.[2] However, beyond 2 weeks after discontinuing latanoprost, the intraocular pressures were not measured. The washout period for brimonidine (an α_2 adrenergic agonist) and epinephrine (α- and β-adrenergic agonist) in clinical protocols is usually 2 weeks. However, we have not been able to substantiate this 2-week washout from clinical data.

The results of this study showed a statistical similarity for washout times between groups. However, compared with brimonidine, a trend existed to a slightly longer mean washout period, and among individuals, washout periods were often greater than 1 month for latanoprost. Both medications demonstrated a wide variation of the washout period between patients.

This study suggests that after discontinuing latanoprost or brimonidine, a wide variation exists in washout times among individuals, with latanoprost demonstrating a trend to a longer washout period.

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Acute Full-Thickness Macular Hole After Uncomplicated Phacoemulsification Cataract Surgery

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PURPOSE: To report the occurrence of a full-thickness macular hole in the early postoperative period after uncomplicated phacoemulsification cataract surgery.

METHODS: Retrospective analysis of a consecutive series of eyes referred for treatment of a full-thickness macular hole after uncomplicated phacoemulsification cataract surgery.

RESULTS: In a 4-year period, five eyes with acute full-thickness macular hole after uncomplicated phacoemulsification cataract surgery were examined. Metamorphopsia and vision loss had occurred 2 to 8 (mean, 4.4) days after phacoemulsification. All eyes had attained normal corrected vision on day 1 postoperatively. A stage 2 full-thickness macular hole was present in four of the five, and a stage 3 full-thickness macular hole in one of the five eyes with acuities of 20/60–20/120 (median, 20/80). All five eyes had successful closure with early primary full-thickness macular hole surgery with visual improvement to 20/20–20/60 (median, 20/40).

CONCLUSION: Full-thickness macular hole may occur rarely during the early postoperative period after uncomplicated phacoemulsification, and early diagnosis and full-thickness macular hole surgery carries a favorable prognosis. The mechanisms underlying macular hole formation in these eyes are unclear. (Am J Ophthalmol 2001;131:799–800. © 2001 by Elsevier Science Inc. All rights reserved.)

ALTHOUGH VARIOUS RETINAL COMPLICATIONS, SUCH as aphakic/pseudophakic cystoid macular edema,[1] peripheral retinal breaks, and retinal detachment,[2,3] have been well described after cataract surgery, and they are thought to be increased by intraoperative breach of the posterior capsule and late posterior capsulotomy for pseudophakic posterior capsular opacification,[1–3] the underlying mechanisms remain unclear.[1–3] Full-thickness macular hole formation has also been described after uncomplicated Nd:YAG laser posterior capsulotomy (PC),[4,5] where transmission of forces through the vitreous has been implicated,[4,5] but its occurrence after uncomplicated cat-

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