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Highlights of Recently Published SLT Studies

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### Five-Year Results Highlight Long-Term Efficacy of SLT



#### Analysis of a Large Patient Series Over Five Years Highlights Long-Term Efficacy of SLT and Potential for Repeat Treatment

During the 2008 Ellex ESCRS SLT symposium, a presentation by Lawrence Jindra, MD focused on the long-term efficacy of SLT. He and his colleagues reviewed five years of retrospective data on a total of 2,056 eyes undergoing SLT as primary, secondary or repeat treatment from January 2002 through February 2007.

At the symposium, Dr. Jindra reported that treatment with SLT in this clinical series resulted in a significantly lowered intraocular pressure (IOP), significantly fewer medications and a reduced repeat rate in comparison to ALT.

#### SLT as Primary Treatment

A total of 879 eyes in this series underwent SLT as a primary glaucoma treatment. Among those eyes, there was a 31 percent mean reduction in IOP, which decreased from a mean of 19.1 mmHg to 13.2 mmHg. Throughout the study, 93 percent of these eyes required no glaucoma medication or repeat SLT treatment.

These primary data appear very good; however, as Dr Jindra pointed out at the symposium, practitioners must bear in mind that although these patients have been

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### SLT: Safe and Effective for Pregnant and Lactating Women

*Jung-II Moon, MD, PhD, South Korea*

Glaucoma treatment considerations for a pregnant or lactating patient can be complicated. All of the drugs used for glaucoma are absorbed by the body, cross the placenta, and are excreted in breast milk. Due to the potential for side effects to the fetus and the infant, the safest option would be to avoid all glaucoma medications altogether and opt for a medication-free alternative treatment to reduce intraocular pressure (IOP).

This need for a safe alternative is what led Doctors Jung-II Moon and Myoung Hee Park from the Catholic University of Korea, Seoul College of Medicine to investigate the efficacy and safety of SLT in pregnant and lactating women. Specifically, their investigation centered on patients

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Glaucoma is a chronic disease which affects an increasing proportion of the global population. Medical therapy has become the mainstay treatment for glaucoma; however, there are a number of compliance issues and side effects associated with medical therapy. Selective Laser Trabeculoplasty (SLT) has emerged as a non-invasive laser technique for managing elevated intraocular pressure (IOP). Indeed, SLT has

become an important addition to my practice; in particular, I have found SLT to be virtually free from side effects, and it demonstrates good efficacy in controlling elevated IOP in the majority of my glaucoma patients.

### SLT is Non-Thermal

SLT uses a 532nm wavelength at 3 nanosecond pulse duration, and features a 400 micron spot size. SLT is a non-thermal mechanism which affects an immunological process in the treated eye – hence, it is gentle and does not cause permanent damage to the trabecular meshwork (TM). Given this, SLT is repeatable, and does not preclude anti-glaucoma surgery – a distinct advantage over Argon Laser Trabeculoplasty (ALT).

### SLT as Primary Therapy

There is strong evidence to support the role of SLT as primary therapy. SLT reduces IOP by an average of 20% from baseline, and its IOP-lowering effect is long-lasting. As such, SLT is suitable as a primary therapy for elevated IOP in patients with ocular hypertension. SLT is also suitable as a primary therapy option in the following situations:

1. Lactating mothers
2. Pregnancy
3. Severe dry eye
4. Where short term IOP reduction is required i.e. steroid responders (after intravitreal or sub Tenons injection).

### SLT as Adjunct Therapy

SLT is also suitable as an adjunct therapy for the following patients:

1. Patients on multiple anti-glaucoma medication suffering from inadequate IOP control
2. Patients with systemic CAI; Note: SLT can assist in the removal of systemic CAI
3. Patients with inadequate control of IOP in need of surgery
4. Patients suffering from poor compliance and intolerance to medication.

## SLT Clinical Tips

- Use the lowest energy setting needed in order to release champagne bubbles; start at 0.6–0.8 mJ and titrate upwards or downwards, as required.
- In order to prevent post-procedural IOP spike, always administer miotics and a tab of Diamox 250mg one-hour prior to treatment.

- Use a Latina lens due to its zero magnification.

- Apply 50 spots over 180-degrees of the trabecular meshwork (TM); apply 100 spots over 360-degrees of the TM.

**Note:** it is possible to perform 360-degree treatment in one sitting, but always apply topical NSAID post-procedure e.g. Acular LS tid for three days, in order to prevent IOP spike.

- A heavily pigmented TM requires less energy. Take care not to confuse pigmentation of Schwalbe's line with pigmentation of the TM.

- Focus the treatment beam over the full height of the TM in order to achieve optimal results.

- Check IOP post procedure at one-hour and four-hour intervals, at day 3 and 7, at week 4 and week 14, followed by quarterly check-ups.

**Note:** approximately 20 percent of patients experience an IOP spike following the procedure.

- When performing repeat SLT, do not treat the same area of the TM within 12 months of initial treatment.

- Wait one month in order to evaluate treatment performance; if target IOP is not achieved, continue anti-glaucoma medication.



*Ellex SLT symposium: ESCRS delegates take part in discussion on SLT.*

diagnosed with glaucoma or the risk of glaucoma, many of these eyes were not yet 'sick.' Instead, these were previously untreated eyes that were being exposed to their first glaucoma treatment.

Today, initial treatment occurs at IOP levels that were generally not treated five or 10 years ago, due in large part to what has been learned about early and effective treatment from controlled clinical trials. This includes data from new technologies like nerve fiber layer and blood flow analyzers, which enable earlier diagnosis and closer tracking of disease and treatment progress. In addition, newly emerging consensus and patterns of thought in glaucoma treatment paradigms have also had an influence.

### **SLT as Secondary Treatment**

A significant number of glaucoma patients among the entire clinical series were referred to Dr. Jindra because their IOP was not successfully controlled by medications and/or because they could not tolerate the systemic and/or local side effects of their glaucoma treatment regimen.

In this arm of the study, 760 eyes underwent SLT as secondary treatment for glaucoma. IOP decreased from a mean of 20 mmHg to 15.9 mmHg over the five-year period, which represented a 21 percent mean reduction in IOP. After undergoing SLT, the number of medications for these eyes decreased from a mean of 2.3 to 1.3, which represented a 44 percent mean reduction in the number of medications required over the five-year study.

This retrospective analysis shows that after SLT, 86 percent of eyes that had previously been on one medication no longer required medication over the five year period. Among eyes that were on two medications, 62 percent required no medication. Among the eyes that underwent SLT as secondary treatment, one out of three patients (32 percent) that were on four medications (dorzolamide hydrochloride, timolol maleate, latanoprost, and brimonidine tartrate) pre-SLT were able to stop taking all medications and have IOP in goal.

While these data are in some ways less impressive than that of the primary therapy arm of the study, it is noteworthy that the mean

reduction of IOP was greater than 20 percent. In addition, these data showed that after SLT, more than three-quarters (77 percent) of these eyes did not require medication to control IOP and keep it in goal.

A small portion of eyes (376 out of 1634) that were initially treated with SLT and were referred to Dr. Jindra for IOP control and/or reduction in side effects required repeat SLT treatment. The incidence of repeat SLT was 11 percent of eyes treated over three years, 18 percent of eyes treated over four years, and 24 percent of eyes treated over five years.

Even with more robust re-treatment criteria than those used for ALT (local and systemic side effects, compliance issues, desire to decrease or eliminate medications), SLT failure rates compare favorably to that of ALT, which have been previously reported at approximately 30 percent failure at three years, with 10 percent failure per year thereafter.

**Dr. Jindra is a glaucoma specialist in private practice in Floral Park, New York; Chief of the Division of Ophthalmology at Winthrop University Hospital in Mineola, New York; and an Assistant Clinical Professor of Ophthalmology at Columbia University in New York City.**

**The data presented at the Ellex ESCRS SLT symposium were previously presented at ASCRS, ARVO, and AAO in 2008.**

## Research Roundup: Highlights of Recently Published SLT Studies

Michael Belkin, MA, MD, Professor of Ophthalmology

**Editor's Comments:** A constant flow of new research regarding SLT is evidence of increased interest in the treatment, which has proven to be efficacious as adjunct therapy to medication, and has also evolved to become a first-line treatment option for glaucoma patients. The following synopsis of recent research includes the mechanism of IOP reduction by laser trabeculoplasty, whether or not the efficacy of SLT can be predicted, the effects of SLT on diurnal IOP fluctuations, and the economics of glaucoma therapy.



### Mechanisms of SLT's IOP-Lowering Effects

In an article expounding on the use of stem cells to treat the trabecular deficiency that causes decrease in aqueous outflow, Kelley et al. (*Exp. Eye Res*, advanced online publications) suggest a novel theory for the mechanism of IOP reduction by laser trabeculoplasty (LTP). This study is based on the work of Raviola in 1982, who described a cell in the anterior trabeculum that was later thought of as a local stem cell, as well as later evidence that ALT increases cell division in that area. The study suggests that LTP increases stem cell activity in the trabeculum, which leads to restoration of cellularity and function. Although similar studies were not performed with SLT, increasing stem cell replication might indeed be one of the mechanisms whereby LTP reduces intraocular pressure (IOP).

Activation of local stem cells, even if factual, cannot explain the total effect of LTP. Support for a previously known mechanism of action is provided by Rhodes, et al (*Curr. Med. Res. Opinion*, 2009;25:787). This study retrospectively examined the IOP changes in the eye that underwent SLT and in the fellow eye of 43 patients with relatively low pre-operative IOP.

In the fellow eyes, mean IOP reduction declined by 11.2 percent ( $2.1 \pm 0.5$  mmHg), as compared to the treated eye, where the mean reduction was 18.8 percent ( $3.9 \pm 0.6$  mmHg). This is probably due to the various cytokines and growth factors released from the treated eye. These molecules are secreted in the treated eye in large enough quantities to enter the bloodstream, be enormously diluted, and still arrive at the other eye in sufficient quantity to lower IOP.

We see the same effect on the other eye with anti-hypertensive eye drops. As in all trials, the extent of IOP reduction was directly related to the pre-treatment level and, in this study, also to the number of glaucoma medications used. There was no significant difference in IOP reduction in either eye according to age, gender, central corneal thickness, extent of treatment, or lens status.

### Predicting SLT Efficacy

Contrary to some preconceptions, prior treatment with prostaglandin analogs has no effect on the extent of IOP reduction induced by SLT. This was shown by Singh et al. (*Eye Advance online publication*, 30 January 2009) who carried out a retrospective study on 123 consecutive patients who underwent 180-degree SLT for the first time.

Of these, 74 received prostaglandin analogs with or without other anti-hypertensive eye drops chronically. The pre-SLT drug therapy of the rest did not include prostaglandin analogs. There was no difference in IOP reduction during the short- and long-term follow up ( $3.9 \pm 4.8$  vs  $4.6 \pm 3.6$  mm Hg,  $P=0.43$ ).

The study by Mao et al. (*J Glaucoma* 2008;17:449–454) was based on 220 patients followed over six months. It showed that SLT efficacy is positively related to IOP level prior to treatment. Like many other studies, the pre-SLT level was shown to be the most important factor in determining SLT efficacy. What is new in this article is that the degree of IOP reduction is inversely related to the maximum IOP ever recorded for the patient. Interestingly, pigmentation of the trabecular meshwork (TM), the precise type of glaucoma and washout of eye drops before SLT were unrelated to the results.

### Effects of SLT on Diurnal IOP Fluctuations

Nagar et al. (*BJO Online First*, December 23, 2008) found that prostaglandins reduced the amplitude of the diurnal variations of IOP somewhat better than SLT in a six-month study, during which the diurnal curve in 40 patients was measured toward the

Jung-II Moon, MD, PhD, St. Mary's Hospital, The Catholic University of Korea, South Korea

who have primary open-angle glaucoma (POAG) and ocular hypertension (OH)<sup>1</sup>. Regenerate recently interviewed Jung-II Moon to discuss and analyze the findings of the investigation.

**Question: How many pregnant or lactating patients with POAG or OH have you been able to follow up on?**

Jung-II Moon: We performed a study on 22 patients (40 eyes) of primary open-angle glaucoma (40 eyes) and ocular hypertension (10 eyes).

**Question: How did you follow up on these patients?**

Jung-II Moon: We followed the recommended SLT follow-up procedure and measured IOP at one hour, one day, one week, one month, three months, and six months after treatment. Anterior chamber reaction and ocular pain were checked on post-operative day one. Peripheral anterior synechia was examined at post-operative six months. Any anti-glaucoma drug was discontinued after the SLT procedure, and restarted when needed.

**Question: Were the results encouraging?**

Jung-II Moon: Absolutely. The mean IOP after using anti-glaucoma medication was 15.7 mmHg (the mean baseline intraocular pressure was 31.6 mmHg) and the mean number of anti-glaucoma drug was  $1.3 \pm 0.6$  pre-operatively. After the SLT treatment, post-operative IOP decrease was 17.9 mmHg at one day, 16.3 mmHg at one week, 17.7 mmHg at one month, 18.4 mmHg at three months and 19.0 mmHg at six months. The mean number of anti-glaucoma drug was reduced to  $0.43 \pm 0.7$  ( $p=0.000$ ) post-operatively.

**Question: Did you observe any significant post-operative complications during the six-month period of follow up?**

Jung-II Moon: No, not at all. Anterior chamber reaction, transient IOP spike and ocular pain were checked on some patients on

post-operative day one. But these symptoms were transient and disappeared over time. There were no serious complications (including PAS) in any of the patients during the six months following SLT.

**Question: Since this study, have you had the opportunity to treat other pregnant or lactating patients with POAG or OH, and did the results confirm the findings of your study?**

Jung-II Moon: I have recently treated not only pregnant or lactating patients, but also patients who are engaged or who have a possibility of pregnancy. They are asking for SLT treatment because they are concerned about glaucoma medications and their side effects.

**Question: Would you then say that priority should be given to SLT when looking for a medication-free alternative treatment in pregnant and lactating women who have POAG and OH?**

Jung-II Moon: SLT has proven to be a safe and effective procedure for fertile female patients who need to discontinue or reduce anti-glaucoma drugs. The treatment seems particularly appropriate for these indications.

**References:**

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## Research Roundup, continued from page 4

Michael Belkin, MA, MD, Professor of Ophthalmology

end of the period (3.6 mmHg, vs. 2.5 mmHg,  $p=0.04$ ). However, this study did not measure compliance, the very likely deficiency of which is bound to produce diurnal and long-term IOP fluctuations. The extent of IOP reduction didn't differ between those who received prostaglandins and those who underwent SLT.

### Economics of Glaucoma Therapy

Cantor et al. (Curr. Med. Res. Opinion 2008,24:2905) compared the five-year costs of three treatment strategies in managing POAG patients not adequately controlled with two medications. These strategies were continued medication, laser trabeculoplasty, and filtering surgeries. Using the Markov model, the authors showed that laser trabeculoplasty is associated with the lowest costs of treatment over five years, as compared to medication alone and filtering surgery.

# Efficacy of SLT in Ocular Hypertension and Primary Open-Angle Glaucoma: Primary Treatment Vs. Adjunct Treatment

Tarek Eid, MD, Associate Professor of Ophthalmology, Tanta University, Egypt



Selective laser trabeculoplasty (SLT) has been gaining wider acceptance since its introduction in 1995 by Latina & Park<sup>1</sup>. Clinical studies suggest SLT is efficacious in lowering IOP, either as initial treatment or when used adjunctive to medical therapy. Response rates after one year range from 59-96 percent, with average IOP reduction from 18-40 percent<sup>2-4</sup>.

Dr. Tarek M. Eid, assistant professor at the Magrabi Eye & Ear Center in Jeddah, Saudi Arabia, has just completed a study to determine the IOP-lowering effect of SLT when used as initial treatment or as adjunctive therapy for primary open-angle glaucoma (POAG) or ocular hypertension (OH). The following are his findings and observations.

## Patient selection and laser technique

For this study, patients were classified into two groups. The first group included newly diagnosed eyes with POAG or OH, and the second included patients diagnosed with POAG or OH and currently on medical treatment with or without previous ALT treatment.

All patients received one drop of brimonidine immediately before the laser treatment to prevent post-operative pressure spikes. All eyes had surface anesthesia immediately before the procedure.

The patient was comfortably seated on the slit lamp chair and a Goldmann 3-mirror lens was inserted in the eye coupled with viscoelastic. The gonioscopic mirror of the lens was rotated to view the inferior angle. The aiming beam was focused on the trabecular meshwork (TM) and a single 400 $\mu$ m spot with 0.8mJ power was delivered at the 12 o'clock position. The power was increased or decreased by 0.1mJ according to the absence or presence of cavitation bubbles.

The end point is maximum energy beyond which a bubble appears in the TM.

The procedure was then continued at this energy level with adjacent but non-overlapping laser spots. Throughout the procedure, bubble formation was monitored with each pulse and energy level was adjusted as described before. The

treatment plan was variable, with most of the eyes receiving 270-degree or 360-degree treatment, with the average number of shots ranging between 75 and 100.

All eyes received non-steroidal anti-inflammatory drops every six hours for five days. Patients were examined after one day, one week, one month, three months, and periodically every three months. Withdrawal or addition of anti-glaucoma drops or repetition of laser treatment in either group was performed according to the IOP level throughout the follow-up period.

## Results

The study included 27 eyes of 15 patients in the primary treatment group (Group 1) and 45 eyes of 28 patients in the adjunctive treatment group (Group 2). Sixteen eyes (59.3 percent) in Group 1 and 39 eyes (86.7 percent) in Group 2 had diagnosis of POAG. Most of the eyes in Group 2 (77.7 percent) were using one or two anti-glaucoma medications.

Laser treatment was confined to three or four quadrants of angle circumference. Baseline IOP was significantly higher in Group 1 (24.8 + 3.5 mmHg) than Group 2 (18.4 + 3.6 mmHg) ( $p < 0.001$ ), with significant lowering in both groups at last follow-up: Group 1 decreased to 17.2 + 1.8, and Group 2 to 16.3 + 1.9 (see Table I).

The mean absolute and percent drop of IOP after SLT at last follow-up was statistically significantly different between both groups (7.6 mmHg, 28.6 percent in Group 1 vs 2.1 mmHg, 8.5 percent in Group 2,  $p < 0.001$ ). The mean number of glaucoma drops decreased from 1.8 before SLT to 1.3 after treatment ( $p = 0.02$ ) in Group 2.

Twenty eyes (74.1 percent) in the primary treatment group had IOP reduction  $>20$  percent from baseline compared to 11 eyes (24.4 percent) in the adjunctive treatment group ( $p < 0.001$ ). In Group 2, 31 (91.2 percent) of 34 eyes with baseline IOP  $<20$  mmHg had  $<20$  percent reduction at last visits.

## Discussion

Many ophthalmologists are increasingly using SLT to reduce IOP because of its wide range of safety, easy applicability, and similar efficacy to ALT<sup>5</sup>. ALT has never been adopted as first-line therapy in glaucoma because of two intimately linked factors: TM scarring and clinical failure rate<sup>4</sup>. The comparable efficacy to ALT and the wider safety margin encourage the use of SLT as initial therapy for IOP reduction in patients with OH and mild to moderate open-angle glaucoma (OAG).

Melamed et al<sup>3</sup> studied 45 eyes of 31 patients with OAG or OH without prior glaucoma medications or after three weeks' wash-

Dr. Tarek Eid will take part in the Ellex  
SLT Symposium during MEACO on  
28 March 2009 in Manama, Bahrain.



Table 1:

Variable	Primary Treatment Group (n=27)	Adjunctive Treatment Group (n=45)	P-value
	Mean + SD	Mean + SD	
Pre-laser IOP (mmHg)	24.8 + 3.5	18.4 + 3.6	<0.001
IOP one month post-laser	17.2 + 2.9	15.6 + 3.8	0.06
IOP 3 months post-laser	16.8 + 1.2	17.7 + 2.8	0.1
IOP at last follow-up visit	17.2 + 1.8	16.3 + 1.9	0.05
IOP drop at last follow-up	7.6 + 3.8	2.1 + 3.4	<0.001
Percent drop of IOP at last follow-up	28.6 + 12.1	8.5 + 18.4	<0.001
Number of glaucoma drops pre-laser	00	1.8 + 0.8	
Number of glaucoma drops at last follow-up	0.6 + 0.7	1.3 + 1.1	0.02

out period and followed-up for 11 months after treatment by 180-degree SLT. They reported a 30 percent drop of IOP (7.7 mmHg) from baseline IOP (25.5 mmHg) at last follow-up visit.

In a prospective, non-randomized trial, McIlraith and associates<sup>4</sup> compared 180-degree SLT to latanoprost eye drops as initial therapy for newly diagnosed OH or early OAG. The average absolute and percent reduction in IOP for the SLT primary treatment group were 8.3 mmHg or 31 percent, compared with 7.7 mmHg or 30.6 percent for the latanoprost group.

Our study supports the findings of previous reports. In the SLT primary treatment group, the IOP was decreased from 24.8 mmHg before treatment to 17.2 mmHg at last follow-up visit (an average drop of IOP of 7.6 mmHg, or 28.6 percent).

In our study, 74.1 percent of eyes had IOP lowering > 20 percent in the SLT primary treatment group. On the other hand, only 24.4 percent of eyes in the SLT adjunctive treatment group achieved a >20 percent drop of IOP from baseline measurements with a mean absolute and percent reduction of 2.1+ 3.4 mmHg and 8.5 percent, respectively.

The high failure rate of SLT to achieve >20 percent IOP lowering as adjunctive treatment in glaucoma patients receiving medications may be attributed primarily to the low baseline IOP, number and type of glaucoma medications used, and glaucoma severity. In the adjunctive treatment group in our study, 75.6 percent of eyes had pre-SLT pressure <20 mmHg, of which 91 percent were unable to achieve >20 percent reduction of IOP at last follow-up.

Hodge et al<sup>6</sup> used multivariate regression analysis to compare predictive factors for success (defined as at least 20 percent drop of IOP from pretreatment level at one-year post-SLT) in 72 patients with OAG on maximum medical therapy. SLT success was significantly predicted by baseline IOP (a higher baseline IOP is related to a higher success) but not by age, sex, other glaucoma risk factors, type of OAG, or by degree of TM pigmentation.

### Conclusion

SLT demonstrated greater efficacy in the reduction of IOP when used as initial therapy for newly diagnosed eyes with OH or POAG than when used as adjunctive therapy for eyes taking anti-glaucoma medications with low baseline IOP.

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## Upcoming Events

### SLT Symposia

STO 2009	MEACO 2009	XXIX Symposium Retinologicum	Slovakia 2009
SLT Symposium 14 March 2009 Tunis, Tunisia	SLT Symposium 28 March 2009 Manama, Bahrain	SLT Symposium 17 April 2009 Gdansk, Poland	SLT Symposium 15 May 2009 Bratislava, Slovakia

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## SLT Compared to Latanoprost with Respect to Diurnal IOP Fluctuation Control

Javier Benitez-del-Castillo, MD, Hospital General, SAS Jerez, Spain

Doctor Javier Benitez-del-Castillo, Hospital General, SAS Jerez, Spain, and his peers<sup>1</sup> recently conducted a prospective case series study of 16 eyes from 8 patients (ocular hypertensives and glaucoma) under latanoprost monotherapy. The purpose was to compare the efficacy of SLT and latanoprost in diurnal IOP fluctuation control.

The reason for the study, according to Dr. Benitez-del-Castillo, was simple. "If we want to position SLT as first-line therapy, it makes sense to compare it with the medication that is the most prescribed. I also chose latanoprost because of its similar mechanism of action to SLT through the activation of metalloproteinases. I then decided to consider the diurnal IOP fluctuation control of both therapies, as this can be considered a risk factor for progression and/or conversion to glaucoma."

Table 1:

	Latanoprost:	Post SLT:	Wilcoxon Test Stat. Sig.
Median from Mean Diurnal IOP mmHg	15.6 (95% CI 14.9 to 16.6)	16.1 (95% CI 15.6 to 17)	P=0.09
Highest Mean Diurnal IOP mmHg	18.3 (SD 1.5)	18.5 (SD 2)	P=0.85
Lowest Mean Diurnal IOP mmHg	13.5 (SD 1.1)	14.0 (SD 1.2)	P=0.3
Mean Diurnal IOP Difference mmHg	4.8 (SD 2)	4.5 (SD 1.5)	P=0.49

In order to analyze and compare the efficacy of SLT and latanoprost on diurnal IOP fluctuation control, diurnal curves were performed in patients who underwent prostaglandin analogue treatment, and topical medication withdrawn immediately following 360 degree SLT treatment (see Table 1). Diurnal curves were again performed two months post follow-up and the data compared. Results were then analyzed using the Wilcoxon test for paired samples.

With latanoprost, the median from mean diurnal IOP was 15.6 mmHg (95% CI 14.9 to 16.6) and median from mean diurnal IOP post-SLT was 16.1 mmHg (95% CI 15.6 to 17). The highest mean diurnal IOP value obtained with latanoprost was 18.3 mmHg (SD=1.5) and 18.5 mmHg with SLT.

With regards to lowest mean diurnal IOP value, the value obtained with latanoprost was 13.5 mmHg (SD=1.1) and 14 mmHg

with SLT (SD 1.2). Finally, the mean IOP diurnal difference obtained with latanoprost was 4.8 mmHg (SD=2) and 4.5 mmHg with SLT (SD=1.5).

According to Dr. Benitez-del-Castillo, "There is no statistically significant difference between mean diurnal IOP, highest and lowest mean diurnal IOP values and mean IOP diurnal difference obtained with SLT and latanoprost."

The conclusion of Dr. Benitez-del-Castillo and his peers was that SLT and latanoprost showed a similar efficacy in diurnal IOP fluctuation control.



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