

Comparative cross over Study of Latanoprost, Timolol and Combination in Primary Open Angle Glaucoma

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INTRODUCTION

Glaucoma is a major cause of blindness in the aging population and of great pharmacologic interest because the chronic form often responds to drug therapy, especially the open-angle one. Latanoprost (L) is a new phenyl-substituted analog of PGF₂a-isopropyl ester that produces an ocular hypotensive effect. It is believed that the mechanism of L on the intraocular pressure (IOP) is by increasing uveoscleral outflow. On the other hand the β -blocker timolol (T) is a well known drug used in glaucoma because of its ability to reduce IOP by decreasing aqueous humor secretion from the ciliary epithelium.

PURPOSE

The aim of this study is to investigate the effects of L (0.005%), T (0.5%) and their combination (L+T) in primary open angle glaucoma (POAG).

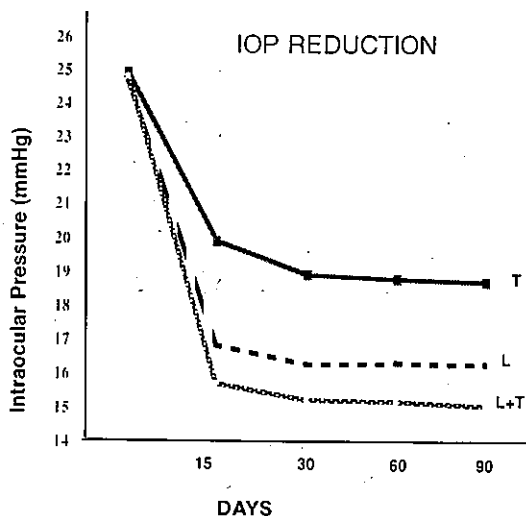
METHODS

A total of 53 patients (45-85 years of age) suffering from open angle glaucoma, were randomly divided in two groups.

Group I: Twenty seven patients, were treated with L 0.005% for 3 months and after a washout period, they were treated with T 0.5% for another 3 months.

Group II: Twenty six patients, were treated with T 0.5% for 3 months and after a washout period, T

was replaced by L 0.005% for 3 months as well. After these months the patients from both groups were treated with the combination of (L+T) for 3 months. During the whole period of the study the IOP was being measured while the visual field and the side effects have been checked and listed.



RESULTS

L reduced IOP at the end of the 3 months period in either group by 8 mmHg (mean value) from a startin IOP [24.93 mmHg (MV)]. T reduced

IOP by 6 mmHg from a starting IOP of 25.07 mmHg (MV). The combination of L+T after a washout period of 15 days reduced the IOP by 9.5 mmHg from a starting IOP of 24.87 mmHg. Statistical analysis of the above results by students t-test showed that L was significantly more effective reducing the IOP than T ($p < 0.01$) in either group I or II. The combination of L+T was significantly more effective ($p < 0.010$) reducing the IOP than either drug alone.

CONCLUSIONS

L 0.005% may be considered as a good drug for the treatment of open angle glaucoma more effective than T and without systemic side effects but more topic effects (conjunctival hyperemia, smarting and rare iridal pigmentation). The combination of L+T was well tolerated but not so effective -although statistically significant- than either drug alone.