

Eye drops VS Selective Laser Trabeculoplasty – Which to choose??

Eye drops and Selective Laser Trabeculoplasty (SLT) are two different options for treating glaucoma, a condition characterized by increased intraocular pressure (IOP) which can lead to optic nerve damage and vision loss if left untreated. The choice between these treatments often depends on the type of glaucoma, its severity, the patient's lifestyle, and their response to previous treatments.

Eye Drops

1. Mechanism: Eye drops lower IOP by either decreasing the production of aqueous humor (the fluid in the eye) or by improving its outflow from the eye.

2. Types: There are several types of glaucoma drops, including prostaglandin analogs, beta-blockers, alpha agonists, carbonic anhydrase inhibitors, and cholinergic agents, which can be used alone or in combination.

3. Administration: Eye drops are self-administered, usually one or more times a day, and require long-term commitment and adherence.

4. Side Effects: They can cause local side effects such as redness, irritation, or eyelash growth, as well as systemic side effects in rare cases.

5. Cost: Ongoing cost for medication, which can be a factor for patients without insurance coverage or with financial constraints.



Selective Laser Trabeculoplasty (SLT)

1. Mechanism: SLT lowers IOP by using a laser to target the trabecular meshwork (the eye's drainage system), improving the outflow of aqueous humor without creating a permanent opening in the eye.



2. Procedure: The laser treatment is performed in an ophthalmologist's office or clinic, usually taking about 10-15 minutes for both eyes.

3. Effectiveness: SLT is often effective in reducing the need for medications, and can be repeated if the effect diminishes over time, generally every 1-5 years.

4. Side Effects: Typically minimal, they can include transient IOP spike, inflammation, or blurring of vision shortly after the procedure.

5. Cost: It involves a one-time cost for the procedure, which can be more cost-effective in the long term compared to the continuous purchase of eye drops.

Comparison -

Efficacy: Both treatments are effective for lowering IOP. SLT may be a good first-line therapy or an alternative for those who are not compliant with or have contraindications to medications. –

Convenience: Eye drops require daily administration, which can be burdensome for some patients, whereas SLT is a one-time procedure with potential long-term benefits. –

Safety: Eye drops carry a risk of local and systemic side effects, whereas SLT has a relatively low risk of side effects, which are generally mild and short-lived. –

Cost: While eye drops have an ongoing cost, SLT may be more economical over time if it reduces or eliminates the need for medication. –

Patient Preference and Lifestyle: Some patients may prefer SLT to avoid the inconvenience of daily eye drops, whereas others might prefer to stick with eye drops due to fear of laser procedures or their specific medical conditions. In conclusion, the choice between eye drops and SLT for treating glaucoma is individualized based on patient factors, disease severity, and the presence of other eye conditions.

Conclusion

The decision is best made by the patient in consultation with their ophthalmologist considering the benefits and limitations of each treatment option.