SLT PROCEDURE GUIDE

IMPORTANT: The following procedure guide pertains to Selective Laser Trabeculoplasty (SLT), and is provided for information purposes only. It is the operating physician's responsibility to be familiar with the latest recommended techniques.

A. Patient Selection

Almost all patients with abnormally elevated intra ocular pressure (IOP), which may benefit from IOP reduction, are suitable candidates for SLT treatment.

Patients with any type of adult glaucoma, and meet one or more of the following criteria, are suitable candidates:

- Require lowering of IOP as primary or secondary therapy
- Unlikely to comply and/or persist with drug therapy
- Have difficulty administering eye drops
- Suffer from drug therapy induced side effects
- Complain of reduced quality of life due to the need to administer eye drops daily
- Failed drug therapy
- Failed Argon Laser Trabeculoplasty (ALT) treatment, or ALT did not reduce IOP sufficiently
- Failed laser trabeculoplasty, or previous SLT treatment did not reduce IOP sufficiently
- Pigmentary or pseudoexfoliation glaucoma (proceed with caution as there is a risk of post-SLT IOP spike)
- Normal tension glaucoma
- Ocular hypertension

SLT has not been shown to be suitable for the following conditions:

- Neovascular glaucoma
- Primary or secondary narrow-angle glaucoma
- Any disease process or malformation that blocks the angle
- Unclear view of the trabecular meshwork (TM)

B. Pre-Treatment

Pre-operative medications typically include an alpha agonist, such as brimonidine tartrate, and topical anesthesia, such as proxymetacaine hydrochloride.

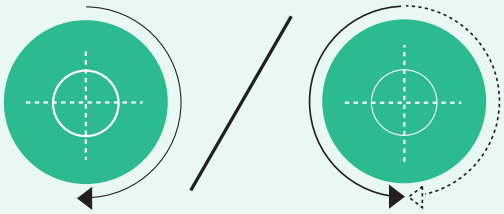
C. Treatment

- The treatment regimen is evolving and protocols vary from treatment of 360º, 180º or 90º of the TM. It has been highlighted that the more aggressive the treatment, the higher the risk of inducing temporary pressure spike, which diminishes within 48 hours.
- To avoid changes to the spot size, a gonio laser lens with 1:1 magnification is used to perform treatment.
- The treatment spot size is fixed at 400µm, which is large enough to irradiate the whole width of the meshwork with some excess. This provides a comfortable margin for treatment; the excess causes no clinically significant effect.
- It is important to obtain a clear view of the TM – focus must be on the target tissue and not on the aiming beam spot.
- 180° treatment involves treatment of a 180° area per treatment period. Treatment is undertaken in single shot mode, placing approximately 50 contiguous but not overlapping energy spots along the meshwork.

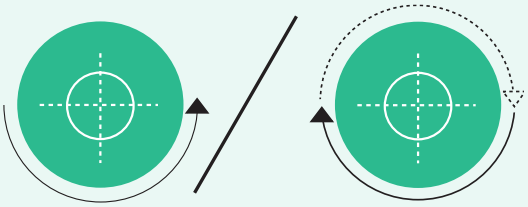
D. Treatment Steps

1. To determine the optimal level of energy for each patient, the laser is initially set at 0.8 mJ (for heavily pigmented TM, set the energy at 0.4 mJ) and the energy level increased in 0.1 mJ steps until the threshold energy level for micro-bubble formation is observed, or decreased in 0.1 mJ steps if bubble formation is noted.
2. After the threshold level is found (when micro-bubble formation occurs), the energy level is decreased in 0.1 mJ steps as treatment continues until bubble formation ceases. This energy is then used for treatment.
3. The process should be monitored and adjusted as necessary depending on pigment variation. Generally, the TM is more heavily pigmented inferiorly than superiorly. With this in mind, two options are possible:

A. Nasal half for first 180° treatment; enhancement treatment will target temporal half.



B. Inferior half for first 180° treatment; enhancement treatment will target superior half.



4. Pigmentation varies significantly between the superior and inferior half, and it is necessary to titrate power levels according to pigmentation moreso if treating the nasal half and temporal half, compared to the inferior half and superior half.
5. Follow-up visits should be scheduled according to the perceived risk of a post-SLT pressure spike and patient access to the treating ophthalmologist. In practice, for patients who do not present a specific risk of pressure spikes, follow-up visits can be scheduled at one week, one month, three months and six months after the treatment, and every six months thereafter to monitor IOP.

E. Post-Treatment

Non-steroidal anti-inflammatory drops may be prescribed four times daily for three to five days.
Note: An increasing number of physicians are electing not to prescribe post-op medications.

F. Observable Side Effects

Side effects resulting from SLT treatment are rare and minimal; these include mild discomfort during the procedure and tender eyes for 2-3 days following the procedure (possibly with mild photophobia).

In a small percentage of cases (<10%) some postoperative increase in IOP has been observed, usually appearing within the first 24 hours and resolving within a further 24 hours. However, a few cases of sustained IOP increase requiring follow-up treatments have been reported.

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