SLT Treatment Guidelines

The following treatment guidelines are based on the results of clinical studies and are provided for information purposes only. It is the operating ophthalmologist's responsibility to familiarize themselves with the latest recommended techniques.

Patient Selection

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

Patients with any type of adult glaucoma, and those who conform to the following criteria, are suitable candidates:

- Require lowering of IOP as either 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 ALT treatment, or if ALT ceased to reduce the IOP sufficiently
- Failed SLT treatment, or if SLT ceased to reduce the 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:

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

Pre-treatment

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

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.

A Latina SLT gonio laser lens, with no magnification to avoid changes to the spot size, 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 overspill. This provides a comfortable margin for treatment as the overspill is of no clinical significance.

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.

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 mini-bubble formation (micro cavitations) is observed, or decreased in 0.1 mJ steps if bubble formation was noted.

2. After the threshold level is found (when mini-bubble formation occurs) the energy level is decreased in 0.1 mJs steps as treatment continues until bubble formation ceases. This energy is then used for treatment. Note that some users aim to treat with minimal fine bubble formation with each application.

Treatment Steps continued

3 The process should be monitored and adjusted as neccessary as pigment variation alters energy uptake at a lower threshold. 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.

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.

4 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 measure IOP.

Post-treatment

Non steroidal anti-inflammatory drops such as Ketorolac or Acular drops four times daily for three to five days.

Note: An increasing number of physicians are electing not to prescribe post-op medications.

Observable Side Effects

There are minimal observable side effects resulting from SLT treatment; these include mild discomfort during the procedure and tender eyes, perhaps with mild photophobia, for 2-3 days.

The absence of adverse side effects is one of the major benefits of SLT treatment.

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

For further information regarding SLT, please visit **slt-ellex.com** - the primary online resource for Ellex SLT users. Alternatively, please contact Ellex at slt@ellex.com.

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