Appendix 3 - SLT protocol

Training was given to all treating surgeons before recruitment. The treating surgeon was the local principal investigator or a fellowship trained glaucoma specialist eligible to apply for a UK consultant surgeon post or for inclusion on the UK GMC Specialist Register, who had performed at least 25 previous SLT treatments.

SLT was delivered to 360º of the trabecular meshwork with one 360° re-treatment as the first escalation of treatment, if required. The model of SLT laser which could be used was not restricted, as the wavelength and spot size does not vary. Pre-treatment with Aprachlonidine 1% at least 15 minutes before laser was mandatory, unless contra-indicated for medical reasons, in which case alternative medications such as oral acetazolamide was used. If no prophylaxis against IOP spikes was used, close post-treatment monitoring of IOP for 2 hours was necessary. One hundred non-overlapping shots (25 per quadrant) of a preset 3 nanoseconds duration and 400µm spot size were applied, with the laser energy varied from 0.3 to 1.4mJ by the clinician using any laser gonioscopy lens (as long as the appropriate magnification is observed: e.g. 'Latina' acceptable but 'Magnaview' not). The desired end-point was the production of a few fine "champagne bubbles": large gas bubbles or TM blanching were not acceptable and, if seen, the operator would titrate the power downwards in 0.1mJ increments. Pigmented TM required lower energy (from 0.3mJ to 1.2mJ) than non-pigmented and it was advised to start treatments at 0.4mJ. The IOP was measured 1 hour after treatment. After treatment patients were not asked to use anti-inflammatory eye-drops routinely but were provided with a bottle of topical non-steroidal anti-inflammatory eye-drops for use only if they were in significant discomfort, despite simple oral analgesia such as paracetamol; topical steroids were not permitted. Any rise of IOP >10mmHg post laser or a rise that put the patient at risk of visual loss was treated at the discretion of the treating ophthalmologist with an earlier recheck of IOP and/or a short-term course of topical or systemic suppressants of aqueous humour production (e.g. acetazolamide), as necessary. An IOP rise needing medical treatment or an extra visit alone constituted an adverse event and was independently logged as such.