Clinical Effectiveness of Selective Laser Trabeculoplasty – *results of a one-year retrospective observational study*

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Introduction

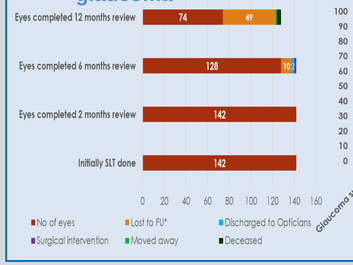
- Since its introduction by Latina and Park in 1995, selective laser trabeculoplasty (SLT)has been shown to be safe, well tolerated and effective in intraocular pressure reduction in open angle glaucoma
- Acting on principles of selective photothermolysis, it induces biological changes to modulate increased aqueous outflow through trabecular meshwork
- This **Aims of this study** are:
  - To assess the effectiveness of SLT in clinical practice
  - To compare 1 year result of SLT to the published data
  - To identify different indications for SLT and compare results in different groups

Material & Methods

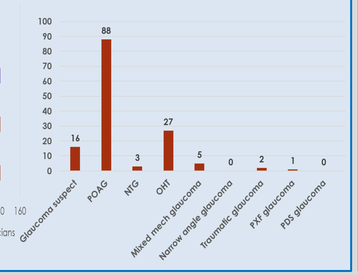
- Retrospective study of patients who underwent SLT between August 2016 to July 2017
- Outcomes reviewed at 2 months, 6 months and 1 year but this presentation pertains to results at 1 year
- Inclusions: patients referred for SLT for the first time
- Exclusions: history of previous SLT and any patients lost to first follow up at 2 months
- SLT performed by single doctor
- Total number – 82 patients (male – 31; females - 51)
- 142 eyes

Results

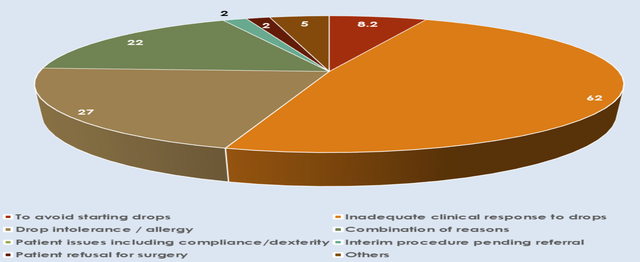
Follow Up glaucoma



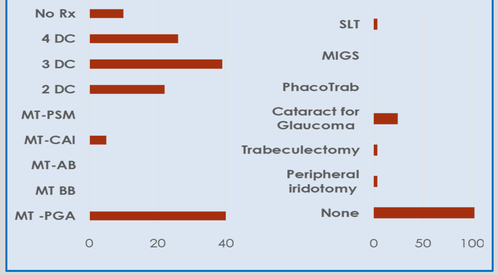
Types of



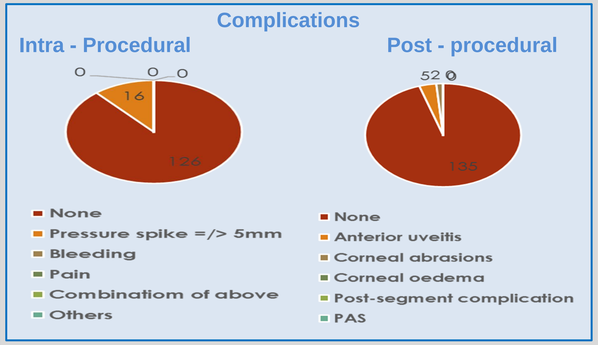
Indications for SLT



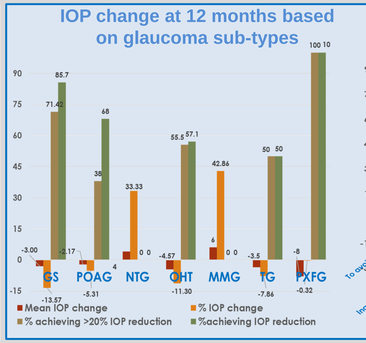
Previous treatments



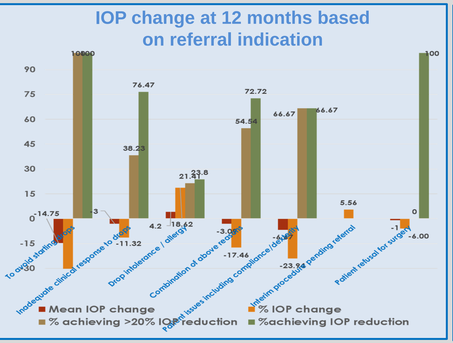
Complications



IOP change at 12 months based on glaucoma sub-types



IOP change at 12 months based on referral indication



IOP reduction

IOP assessment (± SD)	Mean IOP change	% IOP change from baseline	% achieving >20% IOP reduction	% achieving IOP reduction
At 2 months FU	-3.27 ± 5.19	-13.32 ± 24.01	42.2	73.95
At 6 months FU	-2.52 ± 5.43	-8.08 ± 29.77	40.62	67.96
At 12 months FU	-2 ± 6.29	-5.28 ± 34.17	39.18	67.56

Conclusions

- At 12 months, 67.56% achieved reduction in IOP and 39.18%>20% reduction
- In the group with indication "**Avoid use /starting drops**" 88.89% did not need any medications at 1year, indicating good results but those awaiting surgery showed poor results at 1 year
- Good results were noted in **Glaucoma suspect** and **POAG** group but not in **NTG** group
- Repeat SLT was performed in a small group of patients *(not shown in results here)*
- Surgical intervention was required in 15 eyes *(not shown in results here)*
- Complications during and after the procedure is lower than reported studies (11% IOP rise and 3.5% anterior uveitis)

Comparative study of SLT outcomes

	Ipswich	Latina et al	Schlote et al	Kerr et al	Leahy et al	Norwich
Success Rate at 1yr	42.25%		63%	65.9%		71%
Average IOP reduction	2mm SD 6.29 at 1 year	6-5.8 mm at 6 mth				
Overall	67.56%	70%				
IOP spike	11%				28%	
Surgical intervention	10.56%			18.2%		
Repeat SLT	13.3%		7.4%			

Abbreviations:

- SLT -selective laser trabeculoplasty
- IOP - intraocular pressure
- POAG - primary open angle glaucoma
- OHT - ocular hypertension
- NTG – normal tension glaucoma
- MMG - mixed mechanism glaucoma
- PXF - pseudoexfoliation
- PDS - pigment dispersion syndrome
- DC - drug combination
- MT - medical treatment
- PGA - prostaglandin analogues
- BB - beta Blocker
- AB - alpha adrenergic blockers
- PSM - parasympathomimetics

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ePoster: Royal College of Ophthalmology congress May 24th – 27th 2021