Laser in Glaucoma and Ocular Hypertension Trial (LiGHT) – 2022

THE LENS

Objective

To compare Selective Laser Trabeculoplasty (SLT) to topical medications as the first-line treatment for treatment-naïve patients with open angle glaucoma or ocular hypertension

Methods

Design: Multicenter RCT

Sample Size: 718

Treatment Groups:
- 356 to SLT
- 362 to eye drops
- IOP goal was set objectively and additional drops were used to reach it if needed

Outcome Measures:
- Primary outcome: health-related quality of life (measured at 3 and 6 years)
- Secondary outcomes: cost effectiveness, clinical efficacy

Results

Point 1: There were no significant differences in patient-reported quality of life outcomes between the two groups
- EQ-5D scores at 3 years were similar between groups (0.9 in SLT, 0.89 in eye drops, p = 0.23), and were the same at 6 years (0.9 in SLT, 0.89 in eye drops, p = 0.18),

Point 2: SLT was effective at controlling intraocular pressure and managing glaucoma progression
- At 3 years, 95% of SLT eyes were at goal IOP, and 78.2% were at goal without additional eye drops
- At 6 years, 69.8% of patients treated with SLT achieved their target IOP without drops and without incisional surgery (compared to 18% of eyes initially treated with eye drops – which ultimately had other intervention)
- Of the SLT eyes that remained drop free at 6 years, 90% required 2 SLT treatments

Point 3: Costs were found to be significantly lower in SLT groups
- At 3 years, SLT required significantly lower all-in costs than did patient started on drop therapy (avg difference of £451, p < 0.001)

TLDR: SLT should be offered as a first-line treatment option for patients with open angle glaucoma and ocular hypertension

Gazzard G, Konstantakopoulou E, Garway-Heath D, Garg A, Vickerstaff V, Hunter R, Ambler G, Bunce C, Wormald R, Nathwani N, Barton K, Rubin G, Buszewicz M; LiGHT Trial Study Group. Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial. Lancet. 2019 Apr 13;393(10180):1505-1516

Gazzard G, Konstantakopoulou E, Garway-Heath D, Adeleke M, Vickerstaff V, Ambler G, Hunter R, Bunce C, Nathwani N, Barton K; LiGHT Trial Study Group. Laser in Glaucoma and Ocular Hypertension (LiGHT) Trial: Six-Year Results of Primary Selective Laser Trabeculoplasty versus Eye Drops for the Treatment of Glaucoma and Ocular Hypertension. Ophthalmology. 2023 Feb;130(2):139-151.