Long-Term Outcomes of Selective Laser Trabeculoplasty for Open-Angle Glaucoma in the Caribbean

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PURPOSE: To characterize long-term clinical outcomes of monotherapy selective laser trabeculoplasty (SLT) in Afro-Caribbean patients with open-angle glaucoma (OAG) .

DESIGN: This was a post hoc analysis of nearly 8 years (median 3.2, interquartile range 2.1-7.1) of pooled data from the West Indies Glaucoma Laser Study (WIGLS) and its preliminary study.

METHODS: Setting: Three eye care practices in Saint Lucia and Dominica.

PARTICIPANTS: Afro-Caribbean adults with mild-moderate OAG treated with ?2 medications (61 in preliminary stud

INTERVENTION: Participants underwent medication washout, baseline IOP determination, and bilateral 360° SLT. Participants were followed for up to 94 months. Repeat SLT was performed according to pre-specified criteria.

MAIN OUTCOME MEASURES: The primary outcome was mean intraocular pressure (IOP) reduction from baseline. The secondary outcome was medication-free survival with SLT repeated as needed.

RESULTS: The pooled data set included 265 eyes of 133 Afro-Caribbean participants. Mean (standard deviation) baseline IOP was 21.2 (3.4) and 21.2 (3.9) mmHg in right and left eyes, respectively. Over 8 years, mean IOP ranged from 12.8-15.7 mmHg and from 13.1-15.8 mmHg, respectively (pCONCLUSIONS: Monotherapy SLT, repeated as needed, safely provides significant IOP reductions in most Afro-Caribbean adults with POAG through nearly 8 years of follow-up and has significant potential to delay or prevent glaucoma-related vision loss in Black patients in low-resource regions.

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This is a valuable post-hoc analysis of two prospective studies to provide us with information on the efficacy of SLT treatment in an Afrocaribbean sample of patients, who are recognised to have a higher prevalence and often greater severity of glaucoma at a younger age.

While the LIGHT study (1) looked at the impact of primary SLT treatment in a heterogenous population (including approximately 20% Black ethnic group patients) the study by Realini et al. focuses exclusively on a Caribbean population. Additionally, unlike the LIGHT study which looked at primary SLT vs medical therapy, it looks at the use of SLT monotherapy in patients who had previously been diagnosed with open angle glaucoma and were on treatment which was discontinued. The results show monotherapy with SLT could give up to 85 months median medication free survival.

Strengths of study:
8 years of data
Important population to study as economic burden of disease more significant and resources for glaucoma treatment are limited.

Weaknesses of study:
Patients had mild glaucoma so outcomes for more severe disease at presentation unclear
No control group available for patients who continued on medication
Sample size attrition after 42 months.

Notes:
SLT was not primary treatment given but followed from prior medical therapy

References

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