

Selective laser trabeculoplasty for glaucoma in sub-Saharan Africa

Heiko Philippin and colleagues have done a novel and consolidated randomised controlled trial (RCT), which confirmed their hypothesis that selective laser trabeculoplasty (SLT) has superior efficacy to timolol eye drops in managing intraocular pressure in patients with open-angle glaucoma in sub-Saharan Africa.¹ Their finding is crucial, since glaucoma prevalence in sub-Saharan Africa is higher than that in any other world region, with few treatment options.² As an RCT comparing SLT versus timolol eye drops, the authors have used a robust study design. For example, patients (instead of eyes) were randomly allocated to receive either SLT or eye drops. Randomised allocation of patients eliminated a potential crossover effect, which occurred in the Glaucoma Laser Trial when eyes were randomised for treatment.³ Adverse events were well explained and accounted for, and the possibility of various confounders that could have influenced observed differences between groups was also considered.

However, there is no record of the length of time for which timolol eye drops were previously taken by participants, nor any record of other eye drops that patients might have taken before the trial. These are possible confounders that might have influenced the study's results, thus including these variables in the Article's table 2 would have strengthened the quality of this study.

Furthermore, this study's 12-month follow-up period is insufficient, since glaucoma is a long-term condition. The LiGHT trial showed fluctuations in health-related quality of life (HRQoL) scores over their 36-month follow-up, with 81 [25.8%] of 314 patients having unsuccessfully controlled

intraocular pressure without additional eye drops at 36 months following SLT.⁴ The eye drops group also needed more treatment escalations over the 36-month trial. With a longer follow-up period, more knowledge would be attained regarding longitudinal HRQoL, number of trabeculotomy escalations, intraocular pressure, and visual field progression. In addition, the effects of SLT on later eye drop use, and potential long-term effects of SLT on trabecular meshwork function, could be known. Thus, a follow-up of at least 36 months in this trial would be beneficial in answering these further questions.

In conclusion, this well designed study has provided important evidence regarding the feasibility of SLT for open-angle glaucoma. However, to confirm these findings and to introduce SLT into clinical practice in sub-Saharan Africa to transform open-angle glaucoma management, a multicentre RCT with a longer follow-up period and larger sample group is recommended.

I declare no competing interests.

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- 1 Philippin H, Matayan E, Knoll KM, et al. Selective laser trabeculoplasty versus 0.5% timolol eye drops for the treatment of glaucoma in Tanzania: a randomised controlled trial. *Lancet Glob Health* 2021; **9**: e1589–99.
- 2 Steinmetz JD, Bourne RRA, Briant PS, et al. Causes of blindness and vision impairment in 2020 and trends over 30 years, and prevalence of avoidable blindness in relation to VISION 2020: the Right to Sight: an analysis for the Global Burden of Disease Study. *Lancet Glob Health* 2021; **9**: e144–60.
- 3 Glaucoma Laser Trial Research Group. The Glaucoma Laser Trial (GLT) and glaucoma laser trial follow-up study: 7. Results. *Am J Ophthalmol* 1995; **120**: 718–31.
- 4 Gazzard G, Konstantakopoulou E, Garway-Heath D, et al. Selective laser trabeculoplasty versus eye drops for first-line treatment of ocular hypertension and glaucoma (LiGHT): a multicentre randomised controlled trial. *Lancet* 2019; **393**: 1505–16.



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