

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
PIBIC Last Name - Rolim de Moura First Name - Christiane Middle -

Service (sector) Glaucoma N° CEP

LASER TRABECULOPLASTY FOR OPEN ANGLE GLAUCOMA: WHICH TECHNIQUE IS THE BEST?

Rolim de Moura, C., Paranhos Jr. Purpose: Investigate the evidences of the best technique of laser trabeculoplasty for treating open angle glaucoma that is a major leading cause of blindness worldwide. Different technical approaches of this surgical procedure are compared, since there is no consensus on clinical practice. Methods: The review included all relevant randomized controlled trials identified from Cochrane Library, MEDLINE, EMBASE, LILACS and manual search, in which open angle glaucoma subjects were submitted to laser trabeculoplasty. Nd: Yag laser and diode laser were compared with argon laser trabeculoplasty, and also different protocols of laser treatment. The outcomes were failure to control intraocular pressure or stabilize visual field or optic nerve damage progression, change in medication, need of further glaucoma surgery and peripheral anterior synechiae formation. Results: 20 randomized controlled trials met the inclusion criteria. Eight trials were graded at relatively low risk of bias. The general quality of the other 11 studies was low. Comparing different techniques, argon laser trabeculoplasty does not seem to reduce the risk of intraocular pressure control, change in medication, need of further glaucoma surgery nor PAS formation than diode or Nd:Yag laser trabeculoplasty. In regard to specific argon laser protocol treatment, treating the trabecular meshwork in two stages does not seem to reduce the risk of uncontrolled intraocular pressure nor early IOP spikes when compared with treatment in one stage. But at seven years of follow up the risk of needing a new glaucoma surgery is decreased with the treatment performed in two stages (RR 0.23 IC 0.08 – 0.65). When compared the used laser energy, high levels as 800 mW seems to increase the risk of PAS formation (RR 5.80 IC 1.42 – 23.69) when compared with argon laser treatment using 500 mW of energy. Conclusions: Argon laser trabeculoplasty does not seem to reduce the risk of intraocular pressure control, change in medication, need of further glaucoma surgery nor PAS formation when compared with diode and Nd: Yag laser trabeculoplasty in open angle glaucoma subjects. Also in these group of participants, argon trabeculoplasty performed in two stages seems to reduce the risk of need of further glaucoma surgery at seven years of follow up when compared with treatment in one stage. Also using high levels of energy, the risk of PAS formation is increased.