



Retina. 2015 Jun;35(6):1184-94. doi: 10.1097/IAE.0000000000000458.

LASER RESENSITIZATION OF MEDICALLY UNRESPONSIVE NEOVASCULAR AGE-RELATED MACULAR DEGENERATION: Efficacy and Implications.

Luttrull JK¹, Chang DB, Margolis BW, Dorin G, Luttrull DK.

Author information

Abstract

PURPOSE: Drug tolerance is the most common cause of treatment failure in neovascular age-related macular degeneration. "Low-intensity/high-density" subthreshold diode micropulse laser (SDM) has been reported effective for a number of retinal disorders without adverse effects. It has been proposed that SDM normalizes retinal pigment epithelial function. On this basis, it has been postulated that SDM treatment might restore responsiveness to anti-vascular endothelial growth factor drugs in drug-tolerant eyes.

METHODS: Subthreshold diode micropulse laser treatment was performed in consecutive eyes unresponsive to all anti-vascular endothelial growth factor drugs, including at least three consecutive ineffective aflibercept injections. Monthly aflibercept was resumed 1 month after SDM treatment.

RESULTS: Thirteen eyes of 12 patients, aged 73 to 97 years (average, 84 years), receiving 16 to 67 (average, 34) anti-vascular endothelial growth factor injections before SDM treatment were included and followed for 3 months to 7 months (average, 5 months) after SDM treatment. After SDM treatment and resumption of aflibercept, 92% (12 of 13) of eyes improved, with complete resolution of macular exudation in 69% (9 of 13). Visual acuity remained unchanged. Central and maximum macular thicknesses significantly improved.

CONCLUSION: Subthreshold diode micropulse laser treatment restored drug response in drug-tolerant eyes with neovascular age-related macular degeneration. Based on these findings, a theory of SDM action is proposed, suggesting a wider role for SDM as retinal reparative/protective therapy.

PMID: 25650711 [PubMed - in process]



PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)