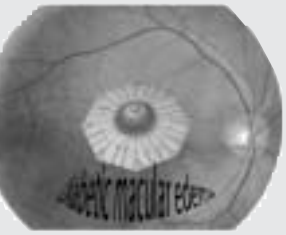

Subthreshold indirect green wavelength photocoagulation for primary treatment in severe diabetic macular edemas

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Purpose:
To evaluate effectiveness and harmlessness of subthreshold grid laser therapy in reducing severe diabetic macular edemas.

Methods:
Retrospective review of 53 consecutive eyes presenting with retinal thickening, microaneurysms and hard exsudates involving or threatening the center of the macula. All 53 eyes received subthreshold (non visible) photocoagulation using green radiation and minimal intensity burns applied in a grid pattern at the level of the retinal pigment epithelium, with no attempt to target or occlude the leaking microaneurysms.

Results:
The average follow-up time was 71 months. At a mean period of 8 months, retinal thickening had partially or completely resolved and microaneurysms disappeared in 75% of the eyes. At 10 months, resolution of exsudates was observed in the same percentage of eyes. Visual acuity was improved in 30%, stabilized in 47% and decreased in 23% of the eyes. No patient complained of paracentral scotomas.

Conclusion:
According to krypton red and diode laser studies, direct closure of microaneurysms is an unnecessary endpoint, thus allowing mild intensity grid treatment with subsequent sparing of the adjacent neuroretina.

Take-home message:
When treating diabetic macular edema use less energy for same efficacy and minimal retinal damage.