

Laser micropulse in CSME

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Advantages:

Laser micropulse in CSME offers the clear advantage of not inducing a visible retinal burn and having a potential efficacy in reducing foveal thickness.

Methods:

Prospective case series. Two hundred and twenty cases of non-ischemic CSME with macular thickness less than 400 microns as defined by OCT were managed primarily and secondarily by laser micropulse using diode laser photocoagulation at 15 % duty cycle with 1000 mW power and spot size of 75-125 microns. Laser micropulse is repeated in 3-4 months if residual leakage is observed. Additional anti-VEGF is used according to the response. Follow up varied from 12 to 36 months. Novel software designed by the Author in which the fundus image is labeled against areas of treatment was used. Evaluation of treatment result was done using fluorescein angiography and OCT.

Effectiveness / Safety:

There were no associated retinal burn seen ophthalmoscopically, and only in a few cases, there was an association with fluorescein angiographic RPE window defect. In 183 (83%) of cases, there was a significant foveal thickness reduction at 4 months of follow up. Additional laser as well as triamcinolone injection was necessary in 16 % of cases.

Take home message:

Micropulse laser is a useful minimal-intensity effective therapy in the management of selected cases of CSME. Future perspective includes the use of micropulse laser in consolidating the effects of anti-VEGF as a minimally invasive therapy.