

Treatment of diffuse diabetic macular edema: bevacizumab versus multifocal photocoagulation

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Advantages:

To evaluate the efficacy of Bevacizumab regarding photocoagulation in the treatment of diffuse diabetic macular edema (EMDD).

Methods:

In a prospective and randomised study, 25 eyes of 15 patients with mean age of 70 years were analysed. Complete ophthalmologic examination was performed with visual acuity – ETDRS (VA), IOP, stereoscopic macular biomicroscopy, retinography, AGF and OCT on the first visit and controls. The first group of 13 eyes was treated with one session of multifocal photocoagulation and the second group of 12 eyes received a single intravitreal injection of bevacizumab (1.25mg/ 0.05mL). Mean follow-up was 7.4 months.

Effectiveness / Safety:

In group 1 the mean initial and final VA (LogMAR) were 0.43 and 0.34 respectively. The mean initial foveal thickness was 383.23 microns and the final 280.92. The central retinal thickness increased in 1 eye (7.6%). In group 2, the mean initial and final VA (LogMAR) was 0.65 and 0.57 respectively. The mean initial central thickness was 372.33 microns and the final 372.75. The thickness increased in 5 eyes (41.6%). The mean VA increased with both treatments, although the difference between them shows a trend towards statistical significance in favour of the photocoagulation ($P=0.065$). Throughout the study period the macular thickness showed a continuous thinning in group 1, which was statistically significant ($P=0.009$). This reduction of the central thickness was not observed in group 2 and the difference between the groups was significant ($P=0.03$). One patient in group 2 left the study because of endophthalmitis after intravitreal injection.

Take home message:

Bevacizumab yielded similar short-time visual outcomes compared with photocoagulation, although not associated with a significant decrease in macular thickness. We recommend caution in the indiscriminate use of bevacizumab in EMDD until further clinical trials with longer follow-up will be evaluated.