

Intravitreal bevacizumab vs macular grid photocoagulation in non-ischemic BRVO


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Advantages:

Intravitreal Bevacizumab achieves better results in terms of visual acuity in these patients.

Methods:

Prospective randomized clinical study with 20 patients with non-ischemic BRVO with macular edema. 11 female and 9 male, the mean age was 71. Two groups: 10 treated with intravitreal Bevacizumab and 10 treated with macular grid photocoagulation. Initial examination including: Visual acuity (VA) (ETDRS), biomicroscopy, fundus examination, Fluorescein angiography (FA) and Optic Coherence Tomography (OCT). The same examination is performed at 3, 6, 9 and 12 months. Results: Analyzing all the patients together the initial mean visual acuity is 23.85 letters and the mean macular thickness is 460 microns. At 12 months the mean VA is 30.46 letters and the mean macular thickness is 321.4 microns. Using the paired samples T test we found a statistically significant difference in macular thickness ($p: 0.00096$) but not in visual acuity ($p: 0.13$). No statistically significant difference in terms of initial VA or macular thickness was found between the two groups. In the intravitreal bevacizumab group we found that the mean number of injections in 12 months was 3.3 (2-7). The initial mean visual acuity was 21.7 letters and the mean macular thickness was 470.3 microns. At 12 months the mean visual acuity was 31.75 letters and the mean macular thickness was 290.1 microns. Using the paired samples T test we found statistically significant differences in macular thickness ($p: 0.000011$) and in visual acuity ($p: 0.04$). In this group, one patient developed an ischemic form of BRVO and one patient presented with macular fibrosis. We have not found complications associated with the injection procedure. In the macular grid photocoagulation group we found that the mean number of laser sessions was 2.1 (1-3). The initial mean visual acuity was 26 letters and the mean macular thickness was 449.9 microns. At 12 months the mean visual acuity was 29 letters and the mean macular thickness was 357.14 microns. Using the paired samples T test we found statistically significant differences in macular thickness ($p: 0.03$) but not in visual acuity ($p: 0.33$). In this group one patient developed macular ischemia and one patient an epiretinal membrane. We have not found complications associated with the laser procedure.



Macular Edemas

Moderator: Giampaolo Gini

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Effectiveness / Safety:

The treatment with intravitreal Bevacizumab seems to be more effective, in terms of VA, than macular grid photocoagulation.

Take home message:

Intravitreal Bevacizumab is a good treatment for non-ischemic BRVO with macular edema, so perhaps we should follow the trend.