Comparison Laser and Combine Laser Bevacizumab in Macular edema due to CRVO

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Background: *laser photocoagulation is a still standard care for Central Retinal Vein Occlussion (CRVO) with macular edema.. However, visual acquity is rarely improve with laser photocoagulation. Vascular endothelial growth factor (VEGF) is known as important factor to macular edema due to CRVO. One possible approach to treat CRVO is to inhibit VEGF activity by Bevacizumab, an anti- VEGF antibody.*
Purpose: *This study is a comparative prospective study to laser photocoagulation versus bevacizumab with laser treatment of macular edema secondary CRVO.*
Methods:*Patients with macular edema secondary to CRVO was assigned in to two group. One group had a laser theraphy alone, the second group had laser therapy combining with bevacizumab intravitreal. Complete ophthalmologic examinations were performed just before treatment and one month after treatment. Changes in the logarithm of minimum angle of resolution (logMAR) visual acuity and central macular thickness is shown by optical coherence tomography (OCT).*
Result: *Nineteen patients was inclused on this study, combination laser photocoagulation and intravitreal bevacizumab revealed a significantly better visual acuity compared with laser photocoagulation treatment (0.35 versus 0.13 logMAR; p 0.041) and reduced macular thickness 120,33µm versus 71,50µm (p 0,277), although this was not significant.*
Conclusion: *intravitreal bevacizumab has a substantial effect on laser photocoagulation in increasing visual acuity of macular edema patients associated with CRVO.*

Introduction

CRVO is a the second common cause of visual loss after diabetic retinopathy. The prevalence of this disease is about 0.3% worldwide. Common complaints of CRVO sufferers are a decrease of vision until a sudden loss of vision. The main cause of visual impairment in CRVO is macular edema.[1]

Since the published Central Vein Occlusion Study (CVOS) study of laser grid photocoagulation therapy is set to standard therapy to reduce macular edema in CRVO patients. CVOS research results found that a sharp increase in the average vision of 1.33 lines in CRVO patients who received laser grid therapy.7,8 Limitations of sharp increase in vision, making the researchers look for other alternatives of macular edema therapy CRVO[2]

Based on the above, we interested to compare the sharp increase of vision and decrease of macular thickness between macula laser photocoagulation therapy with and without bevacizumab combination in macular edema on CRVO