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Adjunctive hyperbaric oxygenation in macular edema of vascular origin.

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Macular edema (ME) is a primary reason for permanent decreases of visual acuity (VA) in diabetic retinopathy and retinal vein occlusions. The standard treatment (photocoagulation, rheological treatment) provide only a limited success. We have therefore studied the additional use of hyperbaric oxygenation (HBO2) in patients with persistent ME. Five patients (1 female, 4 male; 7 eyes) were treated by adjunctive HBO2. The average age of the patients was 60.6 (38.9-76.8) yr. The VA was measured with Early Treatment Diabetic Retinopathy Study charts before and after HBO2 with a monthly follow up. Fluorescein angiography was performed before and after HBO2 with a follow up every 3 mo. Each patient received 10-30 HBO2 treatments (median 15). The follow-up period was 15 mo. for every patient. The mean increase in VA was 3.5 (2-4) lines after HBO2. Retinal photocoagulation was performed in six eyes. Diabetic macular edemas showed no morphologic change, while ME originating from retinal vein occlusions (CME) regressed. The VA in our patients with ME of vascular origin seemed to improve with HBO2. Photocoagulation was necessary in most cases. Visual function correlated with the angiographic presentation only for CME.

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