

# Combined PDT With Intravitreal Bevacizumab Useful for Neovascular AMD

Further investigation with large, controlled trials is warranted.

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Combining photodynamic therapy (PDT) using verteporfin (Visudyne; Novartis, East Hanover, NJ) with intravitreal bevacizumab (Avastin; Genentech, San Francisco) may be useful in treating neovascular age-related macular degeneration (AMD).

We, along with our colleagues from the Barnes Retina Institute in St. Louis and Vitreoretinal Surgery in Edina, Minn., reported in a recent issue of *Retina*<sup>1</sup> that this combination treatment may reduce retreatment rates and improve visual acuity. Previous reports have shown a beneficial effect of PDT with verteporfin combined with triamcinolone for choroidal neovascularization (CNV) secondary to AMD. The average improvement in visual acuity seen with this combination, however, comes with need for frequent injections on regular 4- to 6-week intervals. Retreatment requires frequent follow-up visits and exposes patients to repeated risk of endophthalmitis.

Treatment with bevacizumab, a potent anti-vascular endothelial derived growth factor (VEGF) antibody, may have a beneficial synergistic effect that could reduce the need for retreatment and cyclic injections.

## RETROSPECTIVE SERIES

We performed a retrospective series of 24 eyes that had juxtafoveal or subfoveal CNV secondary to AMD (lesion sizes >6 disk areas were excluded); the patients were treated with verteporfin PDT and 1.25 mg intravitreal bevacizumab. We included only patients with 7 months of follow-up; all of the patients included were naïve to treatment and had either treatment within a 14-day interval.

The main measures of outcome were visual acuity and

retreatment rates; stabilization of visual acuity was defined as no loss or an improvement in visual acuity. We used a standard Snellen chart to measure visual acuity and converted the values to logMAR in order to calculate means. The need for retreatment was based on the findings of persistent subretinal fluid by ocular coherence tomography or leakage by fluorescein angiography. Retreatments consisted of combined PDT and bevacizumab.

At the 7-month follow-up, 20 of 24 (83%) patients had stabilization of visual acuity. An improvement in visual acuity was seen in 16 (67%) eyes, and the mean improvement in visual acuity was 2.04 Snellen lines. We found that, among all lesion types, 15 eyes required only a single initial combined treatment for CNV resolution (63%).

## NO COMPLICATIONS, MEAN IMPROVEMENT

There were no complications of treatment noted in this series, including endophthalmitis, ocular hypertension, uveitis, and nonocular complications.

The mean improvement of 2.04 lines in our series is similar to what has been previously described in newly treated patients who received monthly bevacizumab as monotherapy. Our results appear to be superior, in the short term at least, to those who received PDT alone where patients had an average loss of vision of 2.2 lines (Treatment of Age-Related Macular Degeneration with Photodynamic Therapy<sup>2</sup> [TAP]) and 3.1 lines (Verteporfin in Photodynamic Therapy [VIP]<sup>3</sup>) study.

While the use of adjunctive triamcinolone may limit the gradual decline in vision over the course of therapy,

