

The Role of a Selective VEGF Blockade in Age-related Macular Degeneration (AMD)

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PURPOSE

Selective VEGF blockade with pegaptanib is efficacious and safe for treating all angiographic types of neovascular AMD. Nonselective VEGF blockade, while potent, may present problems, some of which relate to systemic absorption and drug half-life.

METHODS

Visual acuity and safety data from the 3-year VISION trials, additional subgroup analyses of the VISION data, independent case reports, and smaller clinical series recently presented were evaluated in the context of patient and disease characteristics and therapeutic strategy employed. Patients with lesions of varying stages who were treatment-naive or who had undergone previous treatments were included. Subgroups with differing comorbidities treated with pegaptanib as monotherapy, combination therapy, or sequential therapies, and those treated with induction – maintenance paradigms were assessed. Guiding principles for optimal treatment of AMD in these different settings were developed.

RESULTS

In the VISION trials, the rate of rebleak at week 102 was higher with discontinuation of pegaptanib at one year vs. pegaptanib continuation. Enhanced efficacy is observed in patients with earlier disease as seen with both subgroup analyses of the VISION trial results and retrospective data. Though >50% of patients enrolled in the VISION trials had comorbidities that placed them at higher risk for systemic adverse events seen in nonselective VEGF inhibition, no new systemic safety concerns were seen after 3 years of continuous pegaptanib therapy. When substantial initial drying of lesions due to significant submacular or intraretinal fluid is needed, safety and efficacy may be balanced by inducing macular fluid absorption by one agent followed by maintenance therapy with a selective VEGF inhibitor. In patients with more advanced disease who have failed previous therapies, combinations of pegaptanib with PDT, triamcinolone, or nonselective VEGF induction may be warranted.

CONCLUSION

Selective VEGF blockade is a logical monotherapy treatment choice for patients with cardiovascular/ thromboembolic risk and in patients with early disease and earlier diagnosis. Additional expanding roles are being recognized as multidrug strategies are investigated which include combination and sequential drug regimens such as an induction-long-term maintenance intervention model.

* Financial interest disclosed