

Primary Intravitreal Bevacizumab (Avastin) for the Treatment of CNV Secondary to AMD: Results of the Pan-American Collaborative Retina Study Group

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PURPOSE

To report the short-term anatomic and bestcorrected visual acuity (BCVA) response after primary intravitreal bevacizumab (Avastin) in patients with choroidal neovascularization (CNV) secondary to age-related macular degeneration (AMD).

METHODS

Interventional retrospective multicenter study in 4 centers from 4 countries in patients with CNV and AMD who were treated with at least one intravitreal injection of 1.25mg or 2.5mg of bevacizumab. Patients underwent ETDRS testing of BCVA, ophthalmoscopic examination, optical coherence tomography (OCT), and fluorescein angiography (FA) at baseline and follow-up visits. Main outcome measures included changes in VA, OCT and FA. Statistical analysis was performed utilizing the paired Student t test.

RESULTS

Seventy-two eyes of 67 consecutive patients with a mean age of 74.3 ± 10.3 years were included. Mean follow-up was 12.8 weeks (range from 7 to 25 weeks). Ten (13.9%) eyes needed a second injection at a mean of 9.1 weeks (range from 6 to 14 weeks). The mean baseline BCVA was logMAR ± 1.11 and the final mean BCVA was logMAR ± 0.91 , a difference that was statistically significant ($p < 0.0001$). Final BCVA analysis by sub-groups demonstrated that 38 (52.8%) eyes remained stable, 31 (43.0%) eyes improved two or more ETDRS lines of BCVA, and 3 (4.2%) eyes decreased two or more ETDRS lines of BCVA. The mean central macular thickness at baseline by OCT was $386.6 \mu\text{m} \pm 180.1 \mu\text{m}$ and decreased to a mean of $291.1 \mu\text{m} \pm 177.3 \mu\text{m}$ at the end of follow-up ($p < 0.0001$). Adverse events included transient increased intraocular pressure in 2 (2.7%) eyes, and transient hypotony in one (1.3%) eye. No systemic adverse events were observed.

CONCLUSION

Primary intravitreal bevacizumab at doses of 1.25 mg or 2.5 mg provide stability or improvement in VA, OCT and FA in CNV secondary to AMD. Although the results are promising and re-injections may be necessary, follow-up is still short to make any specific treatment recommendations. A multicenter, randomized, placebo-controlled clinical trial with longer follow-up is needed.