Title

Visual Acuity Outcomes and Anti-Vascular Endothelial Growth Factor Therapy Intensity in Macular Edema Due to Retinal Vein Occlusion: An Analysis of 12,214 Eyes

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Purpose

There have been few large analyses of clinical outcomes of anti-VEGF therapy for RVO-related ME.

Methods

Retrospective analysis was performed on a large database of aggregated deidentified EMR (Vestrum Health Retina Database). Treatment naïve RVO patients with ME who underwent anti-VEGF injections between 2013 and 2019 were eligible, if follow up data was available through 12 months.

Results

In 6,914 eyes with BRVO-related ME, at presentation, mean age was 72.3 years, 56% were female, and mean baseline VA was 56.6 letters (20/80 Snellen equivalent). At 1 year, after a mean of 7.4 anti-VEGF injections, mean VA gain was 8.1 letters (95% confidence interval [CI] for change in VA, +7.55 to +8.57; $P < 0.001$). Of these BRVO patient eyes, 9% received intravitreal corticosteroids, 12% received focal laser, and 3% received panretinal laser. In 5,300 eyes with CRVO-related ME, at presentation, mean age was 72.9 years, 51% were female, and mean baseline VA was 39.5 letters (20/160 Snellen equivalent). At 1 year, after a mean of 7.6 anti-VEGF injections, mean gain was 7.1 letters (95% CI for change in VA, +6.31 to +7.95; $P < 0.001$). Of these CRVO patient eyes, 9% received intravitreal corticosteroids, 2% received focal laser, and 6% received panretinal laser. These VA gains compare favorably to those in neovascular AMD (49,485 eyes; 7.3 anti-VEGF injections/eye; +1.0 letter at 1 year; 95% CI for change in VA, +0.77 to +1.13 letter; $P < 0.001$) and DME (28,658 eyes; 6.4 anti-VEGF injections/eye; +4.2 letters at 1 year; 95% CI for change in VA, +3.97 to +4.48 letters; $P < 0.001$), using the same database. For BRVO- and CRVO-related ME, at 1 year, there was a linear relationship between mean letters gained and mean number of anti-VEGF injections . Patient eyes with baseline VA of 20/40 or better tended to lose VA at 1 year.

Conclusions

In clinical practice, RVO-related ME patients experience greater 1-year visual gain than patients with AMD and DME, but exhibit a larger gap in visual gain when compared to respective randomized controlled trials. Mean change in VA correlates with treatment intensity at 1 year. Patients with better VA at presentation tend to be particularly vulnerable to vision loss.

Presented before?

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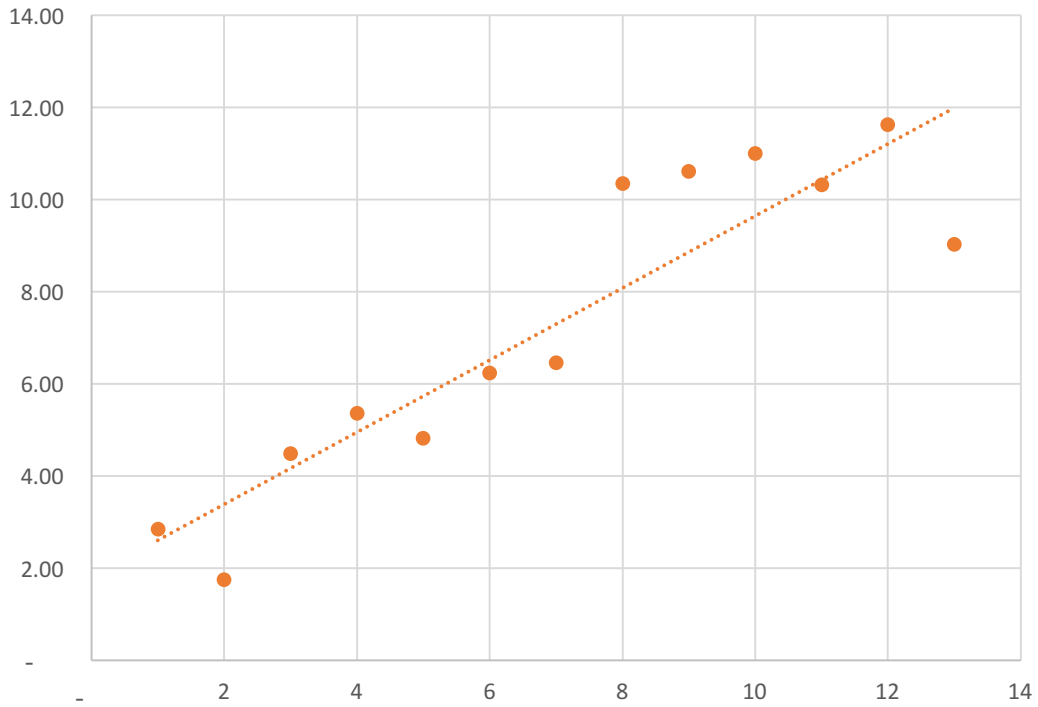
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Total words

350 words out of 350 maximum

Injections vs Letters Gained at 1 Year BRVO

Injections vs Letters Gained at 1 Year
CRVO