Outcomes of Patients With Exudative Age-Related Macular Degeneration Treated With Antivascular Endothelial Growth Factor Therapy for Three or More Years: A Review of Current Outcomes

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This study reports on long-term outcomes of anti-vascular endothelial growth factor (VEGF) therapy (≥36 months) in patients with exudative age-related macular degeneration (AMD).

Studies reporting long-term outcomes (≥36 months) of anti-VEGF therapy (n=11) were identified and analyzed for changes in visual acuity (VA), optical coherence tomography, and safety findings.

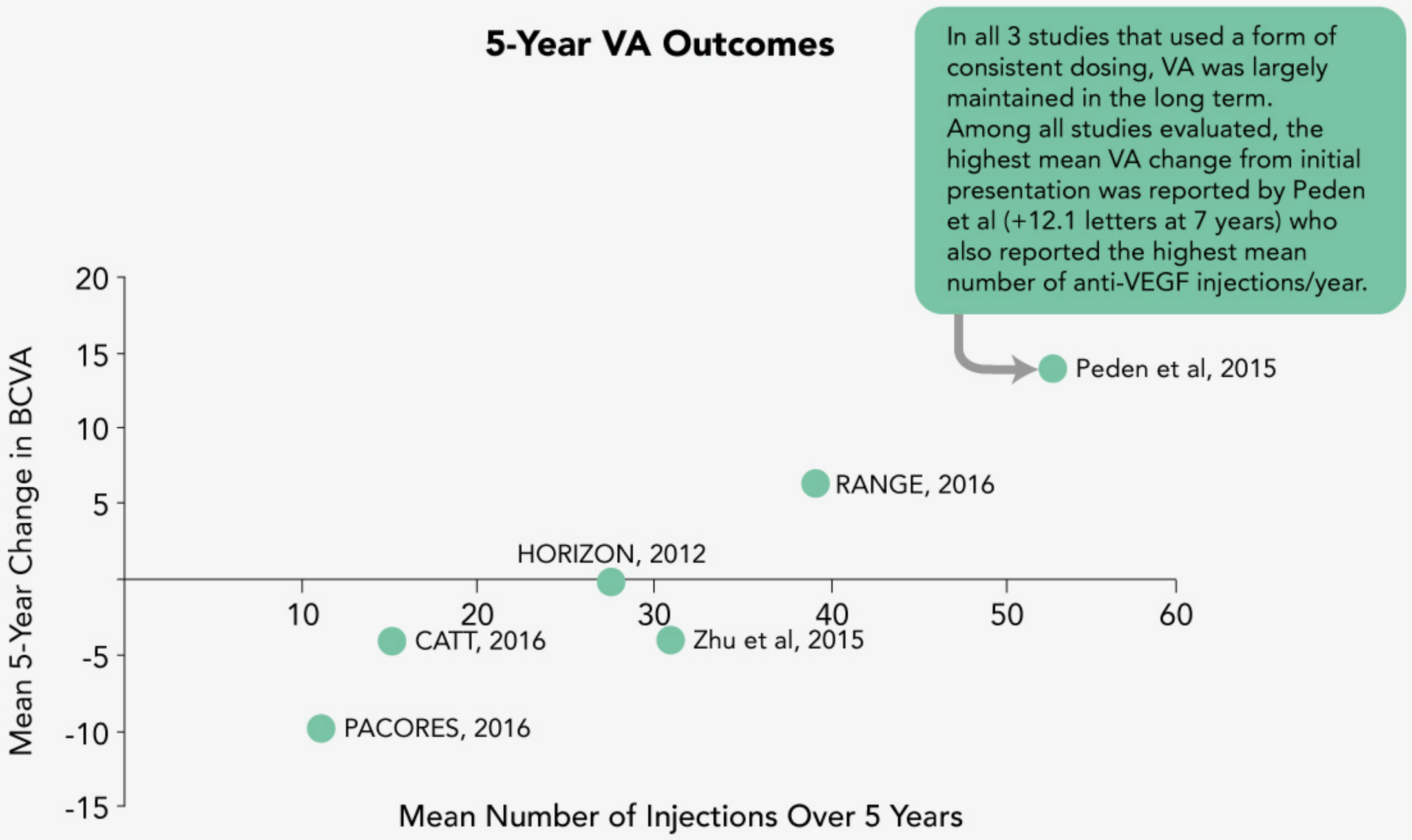
The study found a trend demonstrating a higher frequency of intravitreal injections showed a better maintenance in VA.

In this present analysis of long-term outcomes (≥36 months) from 6 prospective extension/follow-up studies and 5 retrospective studies, significant improvements in VA were observed in the first few years after the start of anti-VEGF therapy, followed by a variable outcome and gradual decline in most studies.

In 5 studies (SEVEN-UP, CATT follow-up, Gillies et al, Zhu et al, PACORES), VA ultimately declined below patients' pretreatment initial baseline; in 3 studies (HORIZON, SECURE, Rasmussen et al), VA ultimately returned to patients' initial baseline.

Of note, in 3 studies (VIEW1 extension, RANGE, Peden et al), a slight decrease in VA was found, which ultimately remained improved over patients' initial baseline.

5-Year VA Outcomes



BCVA=best-corrected visual acuity; CATT=Comparative AMD Treatment Trials; PACORES=Pan-American Collaborative Retina Study Group.

Conclusions

Long-term anti-VEGF treatment outcomes reviewed here from several studies suggest a variable outcome regarding VA based on the frequency and consistency of treatments.

The decline in VA may also be due to disease progression from geographic atrophy (GA), the loss of retinal pigment epithelium, and the overlying photoreceptors, which is the end stage of AMD.

Another possible contributing factor to the observed gradual long-term decline in VA is tachyphylaxis, the process by which drug effectiveness decreases after its repetitive use, which has been reported as a possible mechanism in several studies.