

NeuroVision(RevitalVision LLC.) Treatment in an 83 Year Old Man with Wet AMD

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Introduction

Age Related Macular Degeneration (AMD), is the leading cause of visual impairment in the developed world, damages the central retina, often obliterating foveal vision and severely disrupting everyday tasks such as reading, driving, and face recognition. Thus, eliminates the normal retinal input to a large region of visual cortex¹. That cortical degeneration might limit the efficacy of AMD rehabilitation and training programs² as well as retinal prostheses³.

We report a case of a patient with AMD, where a treatment based on Perceptual Learning improved the Best Corrected Visual Acuity (BCVA) and overall visual function

Methods

An 83-year-old Caucasian male, with a long standing wet AMD in both eyes. the injections of Bevacizumab (Avastin) have been discontinued approximately three years prior to NeuroVision treatments, was enrolled in a NeuroVision Perceptual Learning Program. OCT scans and Visual acuity was tested periodically throughout the treatment period which lasted 16 weeks.

Technology implementation

NeuroVision™ Correction Technology (NVC) is a non-invasive, patient-specific, perceptual learning program based on visual stimulation. It facilitates neural connections at the cortical level through a computerized visual training regime using Gabor patches (Figure 1), to improve contrast sensitivity and visual acuity.

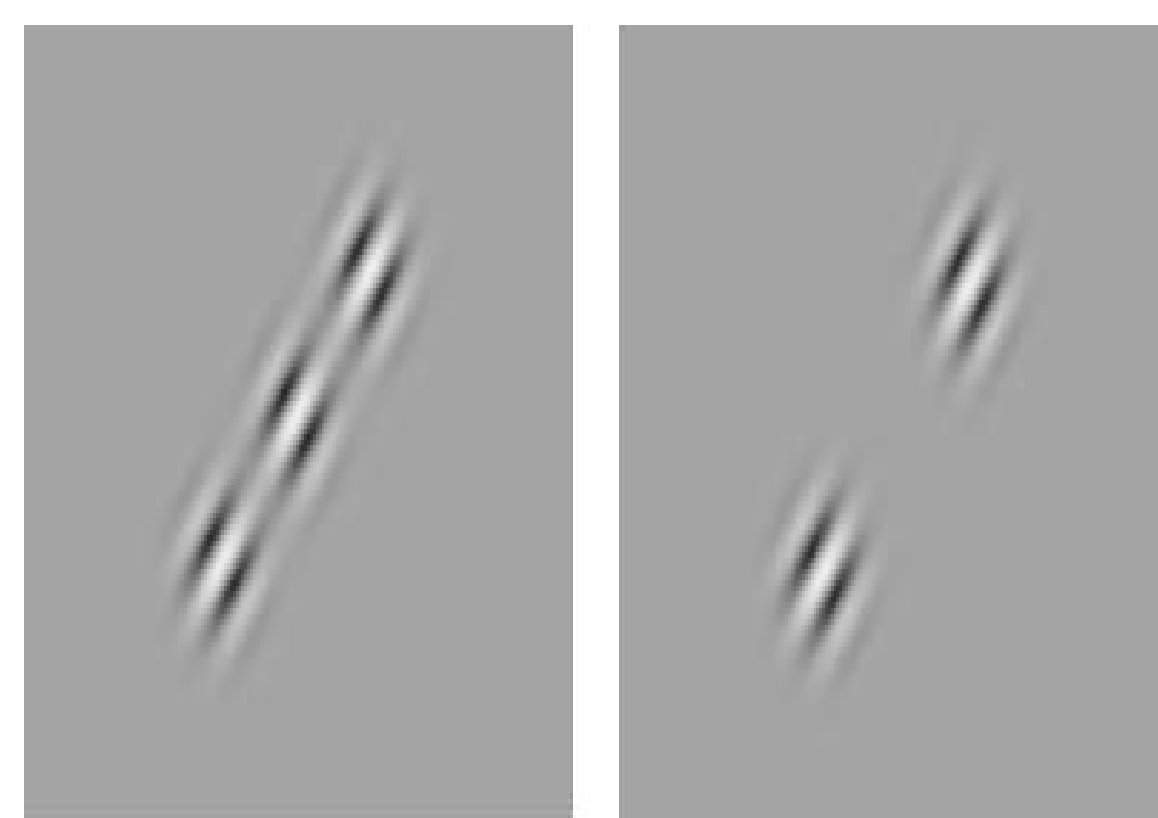


Figure 1: The Gabor Patches

The authors have no financial interest in the materials presented herein.

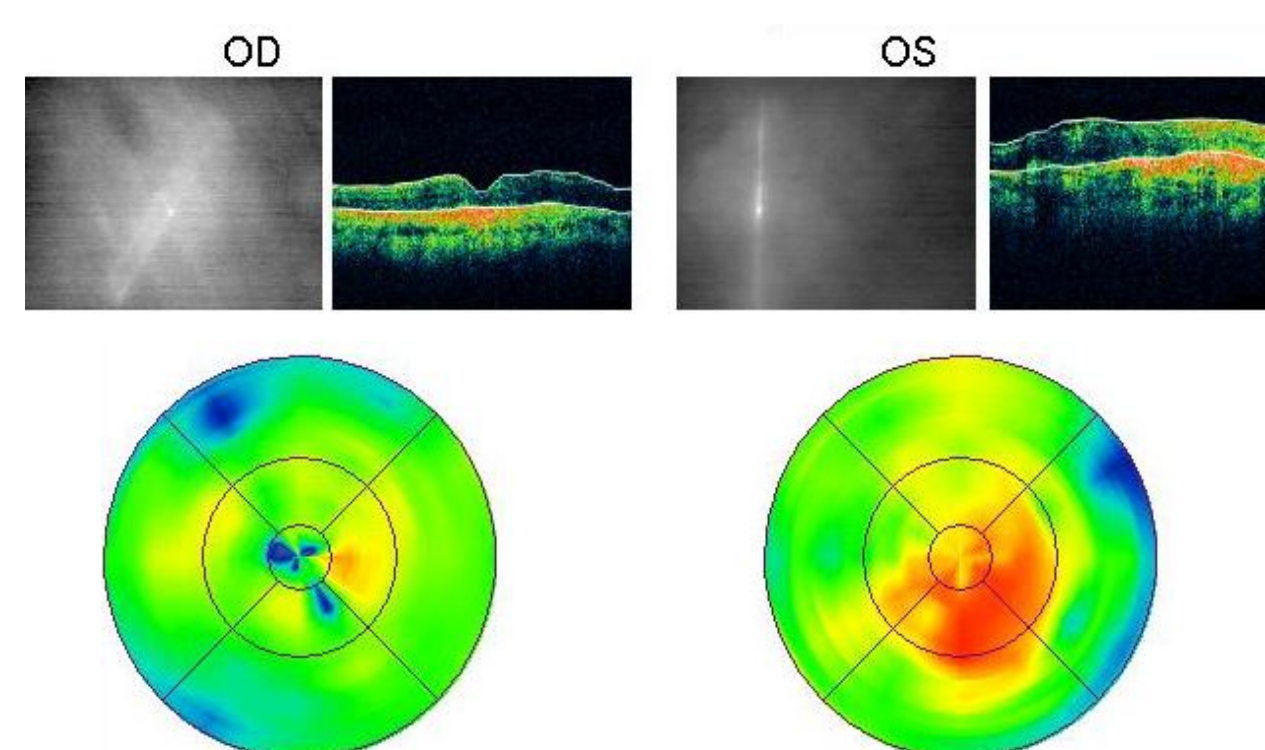


Figure 2: OCT before NeuroVision treatment

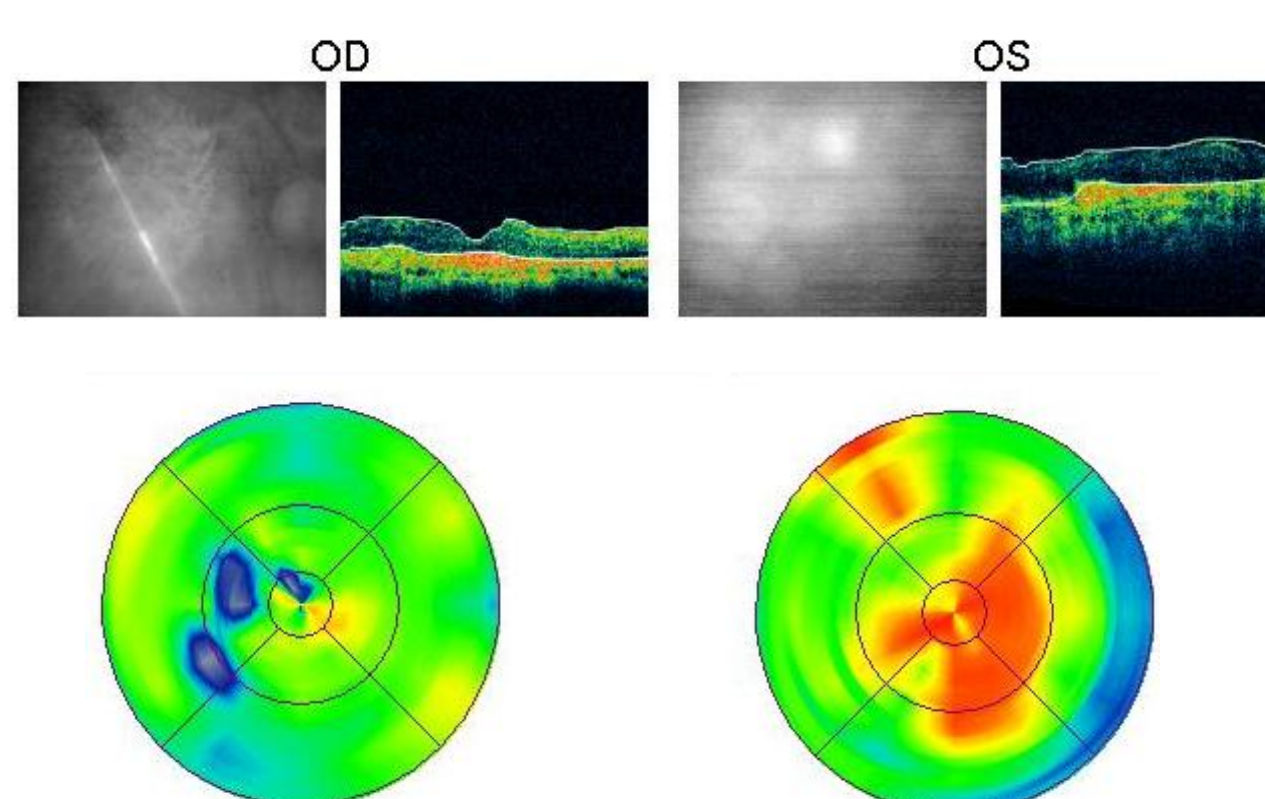


Figure 3: OCT middle NeuroVision treatment

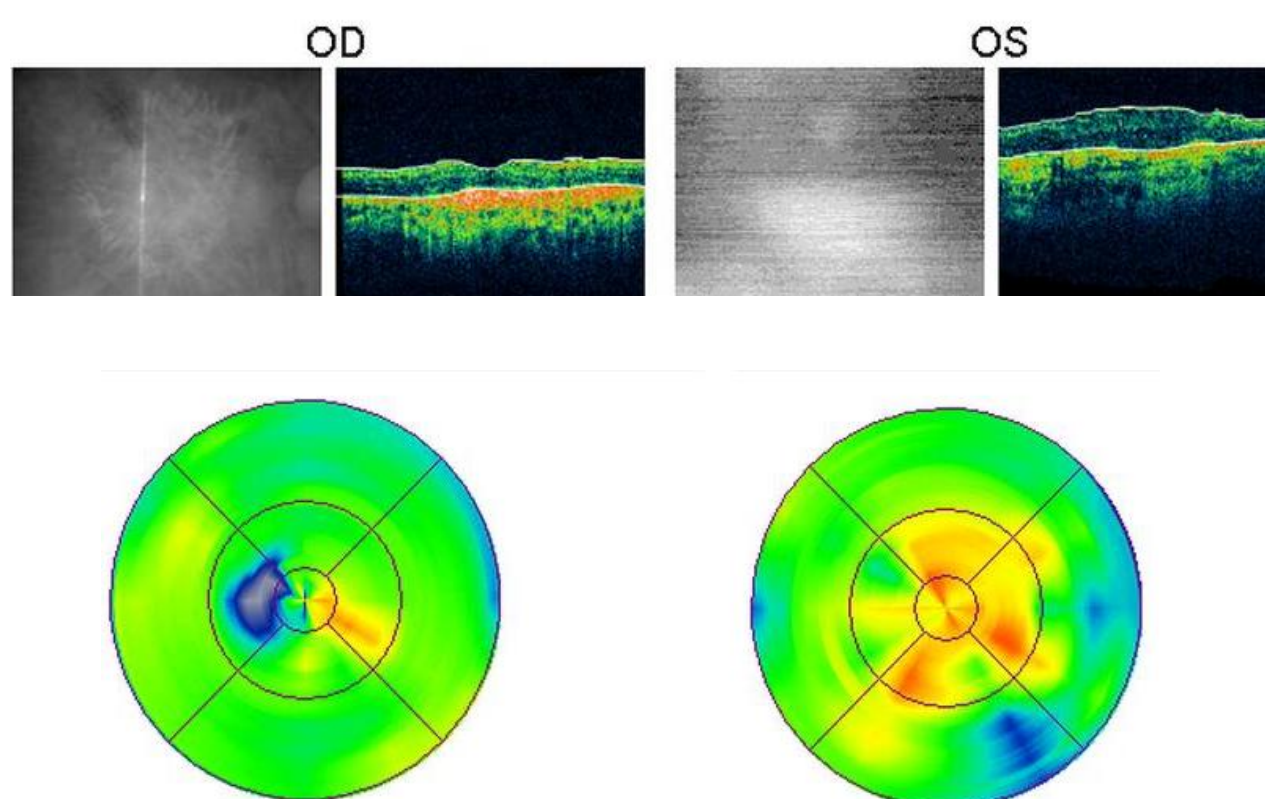


Figure 4: OCT after NeuroVision treatment

Results

Variations in retinal parameters did not correlate with visual outcome in either eye (figures 2-4).

After 61 treatment sessions, BCVA in the right eye reached 6/15, equivalent to 3.0 LogMar lines of improvement (Figure 5). No change was observed in the left eye.

The patient reported a subjective improvement in his quality of vision and life, and was highly satisfied with the outcome. No change in refraction was noted and no side effects were reported.

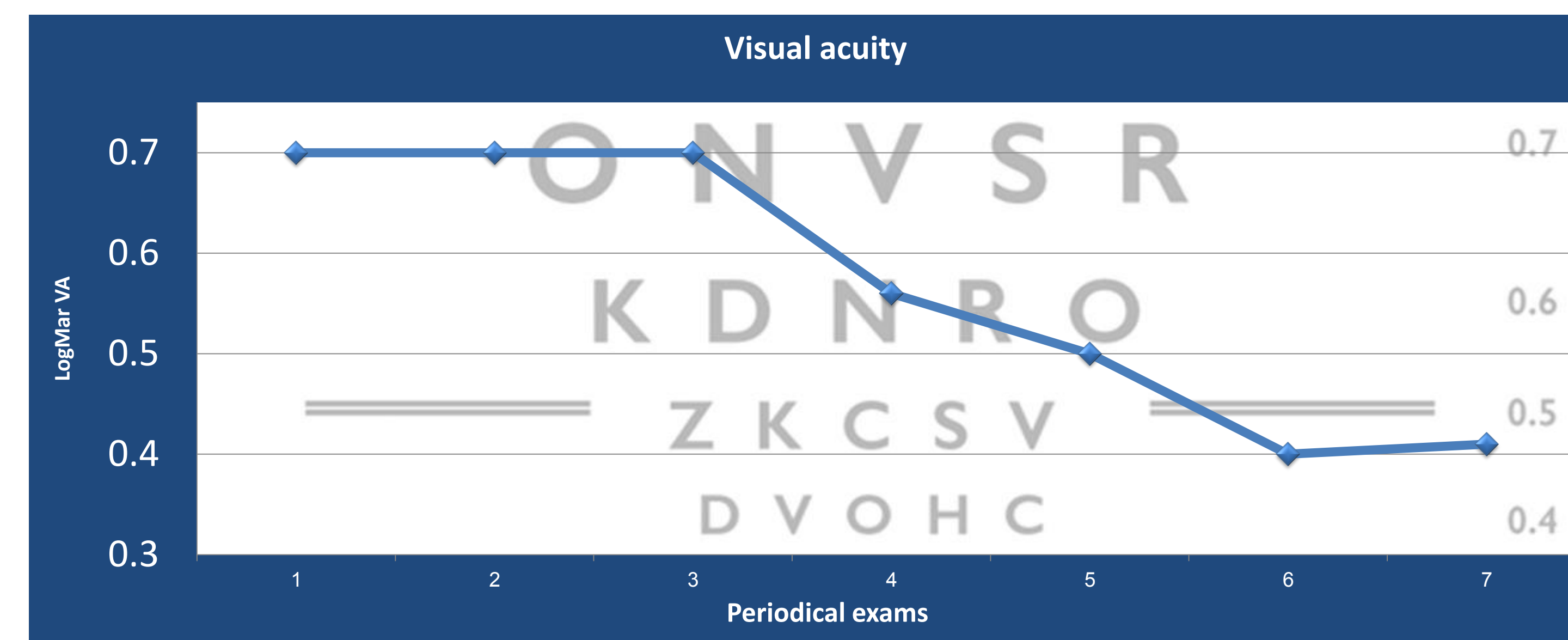


Figure 5: Binocular Visual acuity

Discussion

The visual gain reported in this case of AMD suggests that NVT may be an important treatment modality that may help manage challenging cases. Adding perceptual learning to optical, medical and surgical corrections can contribute to an improved visual outcome in these cases. This encouraging result reported here should be further confirmed in larger scale studies.

References

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