

5th International Conference "Low Vision and the Brain"  
30 November-2 Decembre-Berlin

Computerized Reading Rehabilitation for Patients with Low Vision:  
First Results

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INTRODUCTION

Loss of reading ability is the primary complaint of Age-Related Macula Degeneration (AMD) cases with absolute or relative central scotoma. These patients have difficulties in their daily activities and particularly reading.

OBJECTIVE

We developed a web-based reading rehabilitation software, called Simply Visio to help them rehabilitate reading at home. In this study, we publish the early results of the patients who completed their six-week program with Simply Visio. ([www.simplyvisio.com](http://www.simplyvisio.com))

MATERIAL and METHOD

5 AMD patients, three men, and two women were referred by their retina specialists after finishing their medical or surgical treatments. They were all complaining about significant reading difficulties. The mean age was 78.8 (72-84). They were all pseudophakic. The mean visual acuity was 0,16 (0.02- 0.26) for right eyes and 0.12 (0.01- 0.40) for left eyes. In ETDRS letters, it was 37.2 (6-58) letters for right eyes and 24 (0-85) letters for left eyes. The contrast vision values tested by Metrovision MonPack ONE (Perenchies, France) device's contrast test static low vision program and the results were: 9.7 dB (5.2-12.4) for right eyes and 7.64 dB (0-11.8) for left eyes. The patients reading abilities were tested using MNRRead test chart, and the mean value was 0.75 logMAR (0-0.8) before the rehabilitation procedure.

RESULTS

After completing six weeks of rehabilitation, the MNRRead results were 0.64 logMAR (0.4-1.2). The ETDRS visual acuity scores after the rehabilitation were 45.2 (14-87) letters for the right eyes and 31.6 (1-70) letters. All patients achieved better near and far vision acuities, and they all expressed their subjective satisfaction.

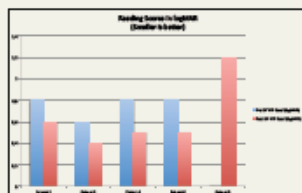


Figure-1. Before and After Reading Scores in logMAR. Tested with the Turkish Version of the MN Read Near Visual Acuity Test Chart.



MN Read Near Visual Acuity Test Chart

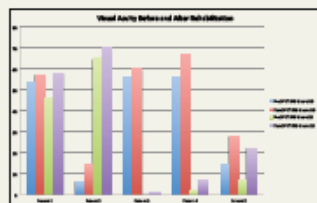


Figure-2. Before and After Rehabilitation. Best Corrected Visual Acuities in ETDRS letters. Tested with Metrovision MonPack ONE device.

CONCLUSION

Reading disability is one of the chief complaints of the patients with low vision and central scotoma. Our results indicate the value of the Simply Visio reading rehabilitation software for the AMD patients with reading difficulties. This software can provide help to the patients doing reading rehabilitation at home.

Results presented in the 5th International Conference  
Low Vision and the Brain in Berlin in 2018