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REPEATABILITY OF READING PERFORMANCE MEASURES IN PATIENTS WITH NEOVASCULAR AGE-RELATED MACULAR DEGENERATION AND GOOD VISUAL ACUITY

Oral

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Purpose:

The aim of this study was to assess the inter-session repeatability of reading performance measures in patients with previously treated neovascular age-related macular degeneration (AMD) and good BCVA ($\geq 20/40$ Snellen) and to investigate the relation between BCVA and reading parameters in patients on treatment for neovascular AMD

Methods:

Ninety-one patients (91 eyes) with a diagnosis of previously treated neovascular AMD and good BCVA ($\geq 20/40$ Snellen) were enrolled. Reading performance metrics were assessed using Radner charts. To test repeatability, we calculated the intraclass correlation coefficient (ICC), the 95% coefficient of repeatability (CR) and the coefficient of variation (CV) for each reading parameter: (i) reading acuity (RA-LogRAD); (ii) maximal reading speed (max RS-words per minute); (iii) reading acuity score (RA score-LogRAD); and (iv) critical print size (CPS-LogRAD). The results of the linear regression analysis of BCVA and reading performance were reported graphically as scatter plots.

Results:

Mean \pm SD BCVA was 0.129 \pm 0.0098 LogMAR [range: 0.00-0.30 LogMAR]. The ICC values indicated a good reliability for all the analyzed metrics (0.901 for RA; 0.859 for max RS; 0.906 for RA score; and 0.868 for CPS). The CR was 0.2 LogRAD for RA, 63.2 words per minute for max RS, 0.2 LogRAD for RA score, and 0.2 LogRAD for CPS. CV was 5.5% for RA, 8.9% for max RS, 5.8% for RA score and 6.9% for CPS. In the univariate analysis, a statistically significant relationship was found between the BCVA and RA, RA score, max RS and CPS.

Conclusions:

Reading performance metrics are characterized by good values of inter-session repeatability in neovascular AMD patients with good BCVA. Our findings may grant the employment of such measures in trials assessing the visual outcome in these patients.