Feasibility of Telehealth Perimetry Using a Head-Mounted Device in Eyes with Stable Defects

AAO Annual Meeting, September 30 – Oct 03, 2022
McLaughlin D, Munshi H, Savatovsky E, Vanner E, Grajewski AL.

Purpose: We assessed the feasibility of remote visual field (VF) testing on individuals with stable VF defects using a virtual reality visual field (VRVF) device (Virtual Vision) without assistance.

Methods: Patients with a recent standard automated perimetry (SAP) exam (≤3 months) were mailed a VRVF device. Using a video platform, a researcher virtually instructed participants on VRVF operations and assisted with their initial exam (V0). Participants tested remotely without assistance once a week for 4 weeks (V1-4). Mean sensitivities (MS) for SAP and V2-4 were compared.

Results: Eight participants (15 eyes) were enrolled. The difference in MS (V3-V2 and V4-V3) ranged from −2.40 to +2.40 dB, with an overall mean difference of 0.23 and SD of ±1.06. The correlation between MS of SAP and MS of V2-4 was r = 0.77; P = .001.

Conclusion: VRVF is a promising option for monitoring VFs in a telehealth setting due to its correlation with SAP, low variability and ease of independent use.