

Establishing a Normative Database in a Pediatric Population using a Virtual Reality Visual Field Test.

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Purpose: To determine pediatric reference values using a virtual reality visual field perimeter.

Methods: Subjects were recruited for a prospective observational study from Pediatric Ophthalmology clinics at a tertiary care institution to take a virtual reality visual field test. Eligible patients were between the ages of 9 and 18 years, had a best-corrected visual acuity of 20/30 or better and had no prior experience with perimetry. An instructional video was shown to subjects to familiarize them with the exam before undergoing a 24-2 standard visual field test using stimulus size V. Mean sensitivities and standard deviations (SD) were calculated for each grid point.

Results: Thirteen eyes (OD=6, OS=7) from eight patients were identified for the study. The mean age of subjects was 13.8 +/- 3.0 years. The average test duration (m:ss) was 5:14 +/- 0:43. The mean sensitivity (MS) OD was 33.6 dB with a mean SD of 1.96 dB at each grid point and MS OS was 35.0 dB with a mean SD of 2.9 dB.

Conclusion: Obtaining pediatric reference values using virtual reality-based perimetry could improve disease monitoring and clinical decision making in this population.