COMPARING RANDOM DOT STEREOTESTS WITH THE LANG TEST IN THE OPHTHALMOLOGICAL PRACTICE

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Introduction. Amblyopia, defined by poor visual acuity in one of the eyes is accompanied by a range of functional deficits and also compromises binocular vision. According to international literature, the currently available stereotests are not sensitive enough to detect anomalies leading to amblyopia. The aim of this research was to test the dynamic random dot stereotest E (DRDSE) in the clinical practice compared to the gold standard Lang II stereotest.
Methods. In this study, a total of 122 children (4 to14 years) were recruited from the pediatric ophthalmology outpatient clinic in Pécs, Hungary. The patients were either healthy or were diagnosed with one or more of the following eye conditions such as amblyopia, anisometropia, strabismus, hyperopia, myopia, astigmatism, and heterophoria. All of them went through a regular ophthalmologic examination and were also tested with the DRDSE.
Result. Altogether 97 children with one or more from the above mentioned eye disorders were included in the study. We examined the most common simultaneously occurring diagnoses, and put the patients into groups on this basis. Group No.1. included patients with astigmatism and myopia. Altogether 16 patients (16.4%) belonged to this group. Further groups were: astigmatism and hyperopia in 9.2% (n=9); hyperopia with convergent strabismus in 7.2% (n=7). The pass-fail ratio of these patients were examined with DRDSE and Lang II tests. The ‘astigmatism+myopia' group failed DRDSE in 32%, whereas Lang II only in 18%. The fail ratio in the ‘astigmatism+hyperopia' group was 66.7% in contrast with Lang's 33%, respectively. Finally, 100% of the ‘hyperopia+strabismus' group failed DRDSE, and only 85% of them did not pass the Lang test.
Discussion. Our data suggests that the DRDSE, compared to the well known Lang II stereotest, would be a more sensitive and reliable method for the screening of amblyopia or other eye disorders potentially leading to amblyopia.

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