

## P-349 - USING SACCADOMETRY TO ENHANCE EFFECTIVELY DIAGNOSIS OF ADHD

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**Introduction:** Some areas of the brain, such as basal ganglia and dorsolateral prefrontal cortex, related to a saccadic control are also involved in the pathogenesis of ADHD. Therefore, examination of problems of eye movements may constitute an effective neurophysiological objective diagnosis of ADHD.

**Aims:** The aim of this study is to assess the differences in fast eye movements (saccades) between ADHD individuals and healthy subjects. The study analyzed the following saccadic parameters: latency, duration, amplitude, average velocity, peak velocity, sharpness, and skewness.

**Methods:** Based on the results of psychological tests: TOVA and CAARS-S:L group of 50 people who had the highest score in the ADHD scales was distinguished. In this study we made use of a Saccadometer.

**Results:** ADHD individuals compared to healthy subjects have more intrusive saccades, anticipatory saccades, and saccades with short latency (< 100ms) and long latency (>500ms). In people with ADHD of low and moderate severity of symptoms duration is shorter and velocity is higher than in healthy subjects, whereas in ADHD individuals with a strong and very strong severity of symptoms duration is longer and velocity is lower compared to healthy subjects. In ADHD individuals amplitude accuracy match in a prosaccades task is better than in healthy subjects, and an antisaccades task is worse than healthy subjects.

**Conclusions:** The results indicate that the differences are varied due to the severity of the symptoms of ADHD. The statistical significance shows that the use of saccadometry for selected parameters of eye movements may improve diagnosis of ADHD.