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The Dependence of the Saccadic Refixation Parameters Values From the Time of Substitution Treatment Opioid Addicted Subjects

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Introduction

The saccadic movements are associated with activation of the certain brain regions. These cerebral areas are responsible also for controlling executive functions. In the current experiment we used an objective test (i.e. saccadometry) to study the effect of a single therapeutic dose of methadone on the integrity of cortico-subcortical brain functioning in individuals with diagnosis of heroin addiction.

Aims

Assessment the ocular movements (saccades) in opioid addicted subjects in the dependence of the time of substitution treatment.

Methods

Eighty-eight patients from the substitution program were examined (mean age 39 ± 7.7 years, mean daily dose of methadone: $71.9 \pm (33.4)$ mg) The study included 55 subjects treated with methadone from one year to three years and subjects treated with methadone from three to seven years. The examination was conducted twice: before and about 1,5 hours after the administration of a therapeutic dose of methadone. Performed Latency Task (LT) with Saccadometr diagnostic system.

Results

The statistical analysis shows that the mean duration after the administration of methadone in the subjects treated with methadone from one year to three years was statistically significantly increased ($p=0,0001$) but in the subjects treated with methadone from three to seven years was no statistically significant difference ($p=0,0524$). No statistically significant differences were found in other parameters of the test.

Conclusion

The results indicate a change in the dynamics of saccade after methadone administration in subjects treated with methadone from one year to three years compared to the subjects treated with methadone from three to seven years.