P-1121 - EFFECT OF A SINGLE THERAPEUTIC DOSE OF METHADONE ON HAND-EYE COORDINATION AND MOTOR LEARNING IN OPIOID-ADDICTED SUBJECTS

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Introduction: Various psychomotor dysfunction are observed in opioid-addicted patients. Therefore it is important to determine the effect of psychoactive substance administered therapeutically in substitution therapy.
Aims: This study aims to assess the impact of a single therapeutic dose of methadone on hand-eye coordination and motor learning in opioid-addicted patients treated in substitution therapy.
Methods: Was examined 72 patients and 60 healthy subjects. The Pursuit Rotor Task (PRT) was used. The PRT was conducted twice: before and about 1 hour after administration of methadone in the opioid-addicted patients and at an about 1 hour interval in the control group. The study was performed for both the dominant and non-dominant hand.
Results: The statistical significantly ($p< 0.05$) influence of administration of methadone on the growth of motor control and to reduce the tremor of high amplitude and increase low-amplitude tremor was found. The opioid-addicted individuals have obtained more than 50% lower scores on psychomotor performance in hand-eye coordination task compared to the healthy subjects. The dynamics of motor learning in opioid-addicted individuals is similar to the healthy subjects and tends to go up, but without reaching a stable level of learning like was observed in the healthy subjects. In the opioid-addicted patients compared to persons from the control group there are more tremors of high amplitude and low frequency and fewer tremors of low amplitude and high frequency.
Conclusions: Administration of a single therapeutic dose of methadone in opioid-addicted patients may reduce high amplitude tremor and improve hand-eye coordination.

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