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REDUCED CORTICAL INHIBITION IN VIOLENT OFFENDERS: A STUDY WITH TRANSCRANIAL MAGNETIC STIMULATION

F. Philipp-Wiegmann, K.D. Römer, W. Retz, M. Rösler

Institut for Forensic Psychiatry, Homburg, Germany

Introduction: Aggression and violent behaviour are often noticed as a threat of society. Therefore, the understanding of violent behaviour has high social relevance.

Objectives: The investigation sample comprised 80 right-handers: 40 prisoners who committed severe violent crimes and 40 controls with no history of violence. All subjects were male and matched for age.

Aimes: We performed a study with transcranial magnetic stimulation (TMS) in a sample of violent offenders in order to measure cortical inhibition in the motoneural system which is part of the frontal cortex.

Methods: To investigate the intracortical inhibition and the intracortical facilitation we conducted paired-pulse stimulation according to the technique of Kujirai et al. (1993). The investigation sample comprised 80 right-handers: 40 prisoners who committed severe violent crimes and 40 controls with no history of violence. All subjects were male and matched for age.

Results: Using the paired-pulse paradigm with interstimulus intervals (ISI) of 1-15ms, a reduced cortical inhibition (ISI 3ms) was found in violent offenders compared with control subjects in the left cortex.

Conclusions: These findings corroborate the hypothesis of inhibition deficits in violent offenders when compared with control subjects due to a lack of impulsive control.