Relationship of information-processing deficits and cognitive performance in unmedicated first episode schizophrenia and effect of antipsychotic treatment

Summary / Zusammenfassung
Deficits in prepulse inhibition (PPI) and habituation (HAB) of the acoustic startle reflex seems to reflect an endophenotype of a group of schizophrenia spectrum patients. This view is supported by the finding that unmedicated first episode schizophrenia patients exhibit a marked PPI and habituation deficit (Ludewig et al 2002). However, more research is needed to clarify whether PPI deficits in schizophrenia involves both trait- and state-linked information-processing disturbances. Moreover, deficits in inhibition or gating of intrusive or irrelevant stimuli may not only lead to positive psychotic symptoms, but also render schizophrenia patients for attentional and higher cognitive disturbances. In support of this view, we recently found that unmedicated first-episode schizophrenia patients with low attention scores showed significantly less PPI compared to subjects with high attention scores and normal or high PPI. Furthermore, preliminary evidence suggests that typical but not atypical antipsychotics may normalise PPI deficits in schizophrenia.

This collaborative study between the PDA Königsfelden and the PUK Zurich aims to clarify further the relationships between information-processing deficits, psychotic symptom formation and cognitive disturbances in never-medicated first-episode schizophrenia and schizophreniform disorders. Information deficits will be assessed by measuring PPI and HAB of the acoustic startle reflex. Cognitive performance (sustained attention, memory, executive functions) will be investigated using tasks from the Cambridge Neuropsychological Test Automated Battery (CANTAB), and decision-making will be assessed by a two-choice guessing task (Paulus et al, 2000). The putative beneficial effect of atypical antipsychotics on these measures will be assessed 1, 6, and 12 months after initial investigation and treatment. Healthy controls, matched for age, gender, education and smoking habits, with no personal or family history of major psychiatric disorders will be investigated in a parallel study without medication.

Publications / Publikationen

Keywords / Suchbegriffe
sensorimotor gating, cognition, schizophrenia, atypical antipsychotics, Keywords: cognition, prepulse inhibition, habituation, schizophrenia, sensorimotor gating, acoustic startle reflex

Project Leadership and Contacts / Projektleitung und Kontakte
PD Dr. F.X. Vollenweider (Project Leader) vollen@bli.uzh.ch
OA Dr. K. Ludewig (Project Leader) katja.ludewig@pdag.ch

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**In Collaboration with / In Zusammenarbeit mit**
collaborative study with CA Dr. M. Etzensberger and Dr. K. Ludewig, Switzerland
Psychiatrische Dienste des Kantons Aargau, Königsfelden
Prof. M. Geyer, Department of Psychiatry, University of California, San Diego, United States
Prof. M. Paulus, Ph.D., Department of Psychiatry, University of California, San Diego, United States

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