

PREFRONTAL CORTEX AND CONTEXT PROCESSING IN MEDICATION-NAIVE FIRST-EPIISODE PATIENTS WITH SCHIZOPHRENIA

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In previous work, we have hypothesized that schizophrenic deficits in a range of tasks can be explained by a disturbance in one prefrontal cortex (PFC) function: the representation and maintenance of context (a component of working memory). Although several lines of research support this hypothesis, the majority of this work has been with chronic, usually medicated, patients. Thus, it is not clear whether such deficits are present at the onset of schizophrenia or develop over time. To examine this issue, we are studying first-episode patients with and without schizophrenia. At admission, participants are medication-naive, and cognitive function is assessed 3 times (admission, 4 weeks, 6 months). Participants also complete an fMRI experiment at admission to study PFC activation during cognitive task performance (AX-CPT). Preliminary analyses confirm the presence of deficits in context representation and maintenance among medication-naive first-episode schizophrenia patients. Further, fMRI analyses suggest that this cognitive deficit is associated with a failure to appropriately activate specific regions of PFC, despite normal stimulus-driven activation of motor and visual regions. As such, these preliminary results provide crucial information regarding the relationships between cognitive deficits and cortical activation early in the course of schizophrenia.