P-789 - TIME-DEPENDENT ACTIVATION OF THEORY OF MIND NEURAL NETWORKS IN SCHIZOPHRENIA PATIENTS-A 3 T FMRI STUDY

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Introduction: Functional magnetic resonance imaging (fMRI) studies in schizophrenia found altered brain activation patterns during Theory of Mind (ToM) task performance in the so-called ToM-network, recently focusing on over- rather than under-activation. Even though most fMRI-studies applied tasks that might gradually activate the ToM-network, no study so far has investigated the time-course of ToM-performance. Some of the varying activation results might thus be due to time-course of performance.

Aim: Our aim was to investigate neural activation over time in schizophrenia compared with a healthy control sample.

Methods: Using a block design in fMRI, we presented a sophisticated paradigm that depicts moving geometrical shapes interacting in social patterns. 14 patients with schizophrenia and 15 healthy controls participated in the study. Functional activation patterns were investigated for the first and second half of the videos separately.

Results: Both groups activated brain areas related to the ToM-network during performance of ToM videos as compared to a baseline condition. Most importantly, schizophrenia patients showed activation in ToM-related brain areas only in the second part, while healthy controls activated the ToM-network in the first part of the video presentation.

Conclusions: Results confirm recent findings of an increased activation in ToM-related brain areas in schizophrenia. Moreover, patients activated ToM-related brain areas later than healthy controls. This delay might be due to a general cognitive slowing, symptom-related inhibition of cognition-associated processes or specific delay in task processing. As this is the first study to investigate this time-course of ToM, more research is needed to classify results.