

PW01-156 - EXPLORATION OF IRONY APPRECIATION IN SCHIZOPHRENIA: A FUNCTIONAL MRI STUDY

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Introduction: Irony is a form of speech used to convey feelings in an indirect way. Patients with schizophrenia demonstrated an impaired irony processing, associated with poor theory of mind.

Aims: We used fMRI to examine neural circuitry underlying deficits in understanding irony in schizophrenia.

Methods: 11 right-handed patients with paranoid schizophrenia and 11 right-handed healthy subjects were studied. Participants were asked to listen short scenarios. The 15 irony condition consisted an ironic statement, and the 15 control condition was physical causality. We used an event-related design. Every scenario started with a two sentences long context, followed by a 2-4 s (jittered) inter-stimulus interval. The third, critical ironic sentence appeared next, and finally a simple yes/no comprehension question followed. Between trials an inter-trial interval of 5-7 s (jittered) were used.

Results: The schizophrenic group performed significantly worse in the irony condition than the control group ($p=0.0008$). Ironic statements resulted in significant activations in the left inferior frontal gyrus (IFG) and insula, right superior and medial frontal gyrus, left postcentral gyrus, posterior division of right superior and left middle temporal gyrus, left lingual gyrus, left cuneus and right inferior parietal lobule in the schizophrenic group. The control group showed significantly greater activity in the left IFG and insula compared to the schizophrenic group.

Conclusions: Among schizophrenic patients we found a significant underactivation in the left IFG and insula during irony comprehension, which may contribute to the impairments of social behavior in schizophrenia.