

PW01-154 - **BRAIN ACTIVATION DURING IRONY TASKS IN EUTHYMIC BIPOLAR PATIENTS - A FUNCTIONAL MRI STUDY OF SOCIAL COGNITION**

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**Objectives:** Deficits of social cognition are a relevant predictor of functioning and outcome. Several studies have found that euthymic bipolar patients perform worse in social cognition tasks than healthy controls. Some data show a higher relapse risk in bipolar patients with concomitant mentalization deficits. However, relatively little is known about the neurobiological base of these deficits.

**Methods:** 12 euthymic bipolar I patients and 14 age- and IQ-matched healthy controls underwent event-related functional MRI study while performing 15 irony, and 15 control tasks (auditory stimulus) in the scanner. Both within group (irony versus control task) and random effects between group analyses were performed on fMRI data.

**Results:** Bipolar patients were significantly compromised in their ability to appropriately answer irony tasks. Bipolar patients showed a reduced activation in right cingulate, right anterior paracingulate cortex, right precuneus, left superior parietal lobule, left hippocampus, left insula in comparison to healthy controls. However, bipolar patients brain activation was significantly increased in the left inferior frontal gyrus, left superior temporal gyrus, and left secondary somatosensory cortex.

**Conclusions:** The findings of this neuroimaging study suggest that euthymic bipolar patients are restricted in their ability to mentalize fully. They show less activation in brain regions involved in mental imagery, emotional processing and self-representation. Therefore, bipolar patients have difficulties in understanding others' intentions and emotions, which impacts on interpersonal relationships and the functional outcome.