

PW01-147 - DIMINISHED LIMBIC ACTIVATION ASSOCIATED WITH FACE PERCEPTION IN PATIENTS WITH SCHIZOPHRENIA

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**Objective:** The authors evaluated cerebral blood flow response in schizophrenia patients during face perception to test the hypothesis of diminished limbic activation related to emotional relevance of facial stimuli.

**Method:** Thirteen patients with schizophrenia and 17 comparison subjects viewed facial displays of happiness, sadness, surprise, anger, fear, and disgust as well as neutral faces using the Japanese and Caucasian Facial Expressions of Emotion and Neutral Faces (Matsumoto and Ekman, 1988). Functional magnetic resonance imaging was used to measure blood-oxygen-level-dependent signal changes as the subjects alternated between tasks of discriminating sex with an interleaved reference condition.

**Results:** The groups did not differ in performance on the task. Healthy participants showed activation in the bilateral fusiform gyrus, medial temporal structures, occipital lobe, and inferior frontal cortex relative to the baseline condition. The increase was greater these regions in the right hemisphere than those in the left hemisphere. In the patients with schizophrenia, minimal focal response in the right fusiform gyrus, medial temporal structures, and occipital lobe was observed for the facial perception task relative to the baseline condition. Contrasting patients and comparison subjects revealed voxels in the left medial temporal structures, occipital lobe in which the healthy comparison subjects had significantly greater activation.

**Conclusions:** Impaired activation was seen in patients with schizophrenia for detection of facial attributes such as sex. Impairment in the medial temporal structure such as amygdale may lead to misunderstanding of social communication and may underlie difficulties in social adjustment experienced by people with schizophrenia.