

P02-152 - DISSOCIABLE LIMBIC AND PREFRONTAL NEURAL RESPONSES TO SAD FACIAL EXPRESSIONS MEDIATE DISEASE EXPRESSION AND RESILIENCE IN BIPOLAR DISORDER

G. Lelli-Chiesa, M.J. Kempton, J. Jogia, S. Frangou

Section of Neurobiology of Psychosis, Institute of Psychiatry, King's College London, London, UK

Objectives: We wished to examine whether patterns of neural engagement during emotional processing could distinguish patients with Bipolar Disorder (BD) from their relatives with Major Depressive Disorder (MDD) and their psychiatrically healthy relatives.

Methods: Functional magnetic resonance imaging (fMRI) data were collected during a sad facial affect recognition task from 41 remitted BD patients, 40 of their first degree relatives (15 of whom had MDD) and 51 healthy controls. Data were analysed in SPM5.

Results:

A) Compared to controls, all individuals with genetic predisposition to BD showed increased activation in temporal lobe regions.

B) Compared to BD patients, MDD relatives had reduced activation in the left posterior cingulate (BA31) and the orbitofrontal cortex (BA11)

C) Compared to their healthy relatives, BD patients showed increased activation in somatosensory cortices bilaterally (BA3 and BA5) and in the posterior cingulate gyrus (BA30) on the left and reduced activation in the right cerebellum and the right inferior frontal gyrus (BA47).

D) Compared to their healthy relatives, MDD relatives showed reduced activation in the left superior frontal gyrus (BA10).

Conclusions: Our results suggest that:

(a) genetic predisposition to BD was associated with increased activation in distal nodes of the ventral visual pathway within the temporal lobe

(b) disease expression for mood disorders was associated with reduced neural responses in the PFC

(c) resilience in healthy relatives was associated with enhanced PFC engagement

(d) loci identified showed partial specificity for different clinical phenotypes indicative of partially segregated processes underpinning disease and resilience for mood disorders.