

**P02-249 - REDUCED PREFRONTAL AND ORBITOFRONTAL GRAY MATTER IN FEMALE ADOLESCENTS WITH BORDERLINE PERSONALITY DISORDER: IS IT DISORDER SPECIFIC?**

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**Introduction:** Neuroimaging studies in adults with borderline personality disorder (BPD) have reported alterations in frontolimbic areas, but cannot differentiate between alterations originating from disease and those occurring as side-effects of medication or other consequences of the disorder.

**Objectives:** To provide a clearer picture of the organic origins of BPD, the present study reduced such confounds by examining adolescents in the early stages of the disorder. It also examined the extent to which alterations associated with BPD are specific, or shared more broadly among other psychiatric disorders.

**Methods:** Sixty right-handed, female adolescents (14-18 years) participated. 20 had a DSM-IV diagnosis of BPD, 20 had a different DSM-IV defined psychiatric disorder, and 20 were healthy controls. All groups were matched for age and IQ. Images were analysed using voxel-based morphometry.

**Results:** No differences were found in limbic or white matter structures. Compared to healthy controls, adolescents with BPD displayed reduced gray matter in dorsolateral prefrontal cortex bilaterally and in left orbitofrontal cortex, but there were no significant differences in gray matter between BPD and other psychiatric patients. Like BPD patients, non-BPD psychiatric patients displayed significantly less gray matter in right dorsolateral prefrontal cortex compared to healthy controls.

**Conclusions:** These findings indicate that the prefrontal cortex is the earliest affected in the progression of BPD, but this does not distinguish it clearly from other psychiatric disorders. Alterations in limbic areas and white matter structures were not observed, but may play a later role in the progression of the illness.