

P02-344

ASSESSMENT OF WHITE MATTER ABNORMALITIES IN PARANOID SCHIZOPHRENIA AND BIPOLAR MANIA PATIENTS FROM CHENGDU, CHINA

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Introduction: White matter abnormalities have been repeatedly reported in both schizophrenia and bipolar disorder (BD) diseases from diffusion tensor imaging (DTI) studies respectively, while the empirical evidences about the diagnostic specificity of white matter abnormalities in these disorders are still limited.

Objectives: 25 patients with paranoid schizophrenia and 18 patients with bipolar mania were recruited from the in-patient unit of the Mental Health Centre, West China Hospital, China. Patients were diagnosed according to the criteria of Diagnostic and Statistical Manual of Mental Disorders- Version IV (DSM- IV). 30 healthy controls were recruited from the community by means of leaflets distributed throughout Chengdu city.

Aims: This study sought to investigate the alterations in fractional anisotropy (FA) in white matter throughout the entire brain of patients from Chengdu, China with paranoid schizophrenia and bipolar mania.

Methods: Diffusion tensor imaging (DTI) was used to assess white matter integrity in patients with paranoid schizophrenia and bipolar mania , as well as in normal controls . The differences in FA were measured by use of voxel-based analysis.

Results: Reduced FA was found in the left posterior corona radiate (PCR) in patients with bipolar mania and paranoid schizophrenia compared to the controls. Patients with bipolar mania also showed a significant reduction in FA in right posterior corona radiate and in right anterior thalamic radiation (ATR).

Conclusions: Common abnormalities in the left PCR might imply an overlap in white matter pathology of both diseases and might be related to the shared risk factors for both disorders.