

## AS06-04 - WHITE MATTER IN BIPOLAR DISORDER: RELEVANCE TO PATHOPHYSIOLOGY AND TREATMENT

T.Kieseppä<sup>1,2</sup>

<sup>1</sup>National Institute for Health and Welfare, <sup>2</sup>Psychiatric Clinic, Helsinki University Central Hospital, Helsinki, Finland

**Introduction:** Converging evidence from neuroimaging studies indicates that white matter abnormalities may be involved in bipolar disorder (BP). One most consistent finding, though not universal, has been the increased occurrence of white matter hyperintensities (WMH) in BP patients. The role of hyperintensities in the pathogenesis, and treatment of mood disorders remains unclear. However, the diffusion tensor imaging (DTI) has expanded somewhat our understanding of white matter in BP.

**Aims:** During this presentation I will give the overview of the white matter pathology in BP. In addition, I will introduce the results of our study concerning WMH, affective disorders, and neuropsychological functioning.

**Methods:** We have studied 13 BPI, 15 BPII, 16 major depressive patients, and 21 controls at baseline, and at 5-year follow-up. Besides clinical interviews, further detailed investigation comprised a neuropsychological test battery and structural brain imaging with DTI. WMH were calculated manually, and DTI will be analyzed using tract based statistical methods.

**Results:** BPI patient group had increased risk for DWMH contrary to BPII and MDD patients when compared to controls. Increased DWMH grade together with age and BDI score predicted decreased capability of visual attention measured by visual span forward subtest of the WMS-R.