

BRAIN MORPHOLOGY OF SUBJECTS WITH SCHIZOPHRENIA SPECTRUM DISORDER WITH AND WITHOUT ANTIPSYCHOTIC MEDICATION - THE NORTHERN FINLAND 1966 BIRTH COHORT STUDY

J. Moilanen¹, S. Huhtaniska¹, M. Haapea¹, E. Jääskeläinen¹, J. Veijola¹, M. Isohanni¹, H. Koponen², J. Miettunen¹

¹University of Oulu, Oulu, ²University of Eastern Finland, Kuopio, Finland

Introduction: Recently many studies have suggested more brain morphometric changes occurring in people with schizophrenia who use antipsychotic medication compared to those who do not.

Objectives: We will study the brain morphology of subjects with schizophrenia spectrum disorder with and without antipsychotic medication.

Aim: Our aim was to compare the brain morphology of subjects with schizophrenia spectrum disorder with and without antipsychotic medication after in average ten years of illness, and analyse the association between cumulative dose of lifetime antipsychotic medication and brain morphology.

Methods: Data of 66 subjects with schizophrenia spectrum disorder (mean duration of illness 10.4 years) from the Northern Finland 1966 Birth Cohort were gathered by interview and from hospital records. Structural MRI data at age 34 years were acquired from all participants on a GE Signa system operating at 1.5T.

Results: Of the subjects 16 (24%) had taken no antipsychotics during the previous year. We found no significant differences on total grey matter volumes (TGM) between subjects with and without antipsychotic medication. In the voxel-based analyses subjects with medication had lower volume in left parahippocampal gyrus ($p=0.003$), when adjusted for sex, onset age, TGM and remission status. There were no associations between lifetime antipsychotic dose and brain morphology.

Conclusions: We were able to study effects of antipsychotic medication in population-based sample. Brain morphology in medicated and non-medicated persons were similar and the cumulative lifetime medication had no effect on brain morphology, which suggests that possible medication effect in cross-sectional measures of brain morphology is small.