

## Association Between Epilepsy and Psychotic Disorders in the Northern Finland Birth Cohort 1966 Study

T. Nordström<sup>1</sup>, E. Jääskeläinen<sup>1</sup>, E. Keskinen<sup>2</sup>, J. Uusimaa<sup>3</sup>, I. Rissanen<sup>2</sup>, M. Isohanni<sup>2</sup>, J. Miettunen<sup>2</sup>

<sup>1</sup>Institute of Health Sciences, University of Oulu, Oulu, Finland ; <sup>2</sup>Department of Psychiatry Institute of Clinical Medicine, University of Oulu and Oulu University Hospital, Oulu, Finland ; <sup>3</sup>Department of Pediatrics Institute of Clinical Medicine Clinical Research Center, University of Oulu and Oulu University Hospital, Oulu, Finland

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**Introduction:** Individuals with epilepsy have commonly comorbid psychiatric disorders but only a few studies have focused on psychotic disorders.

**Objectives:** To study the possible comorbidity between epilepsy and psychotic disorders.

**Aims:** To investigate how epilepsy and non-organic psychotic disorders associate in a large population based birth cohort.

**Methods:** The study sample comprised 10,933 individuals from the prospective Northern Finland Birth Cohort 1966. Cox regression analysis (Hazard Ratios, HR) was used to study risk of psychotic disorders among those with and without epilepsy. Gender, mental retardation and family history of psychosis were used as covariates. Epilepsy diagnoses were based on various nationwide registers and questionnaires. Information on psychoses (ICD-10) was based on nationwide registers.

**Results:** A total of 373 (3.4%) cohort members suffered from non-organic psychotic disorders and 386 (3.5%) of epilepsy by the age of 46 years. Members with epilepsy had 2.0-fold risk for psychosis when compared to those without (adjusted HR 2.0; 95% Confidence Interval 1.4-2.9). The risk was high for non-schizophrenic psychoses (adjHR 4.0; 2.4-6.6), whereas epilepsy did not associate with schizophrenia spectrum diagnoses (adjHR 1.1; 0.6-2.0). Especially individuals with focal epilepsies developed commonly (12 of 87, 13.8%) psychotic disorders.

**Conclusions:** Epilepsy increases risk for subsequent non-schizophrenic psychoses even when adjusted with other factors. Those with focal epilepsies were especially in risk. There are several possible etiologies and pathomechanisms, including genetic, structural, functional and metabolic factors. Common comorbidity between epilepsy and psychoses demands active and extensive clinical care by the multidisciplinary team.