

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

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Objectives: Individuals with epilepsy have commonly comorbid psychiatric disorders. There are a few studies which have focused on non-organic psychotic disorders (Bredkjaer et al. Br J Psychiatry 1998, Wotton et al. Epilepsia 2012). Our aim was to investigate how epilepsy and non-organic psychotic disorders associate in a large population based birth cohort.

Methods: The study sample comprised 10,925 individuals from the prospective Northern Finland 1966 Birth Cohort. The sample have been followed until age of 45 years. Cox regression analysis (Hazard Ratios, HR) were used to study risk of psychotic disorders with epilepsy status. 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 was based on nationwide registers, including both inpatients and outpatients.

Results: A total of 334 (3.0%) cohort members suffered from non-organic psychotic disorders and 331 (3.0%) of epilepsy by the age of 45 years. The cohort members with epilepsy had 1.7-fold risk for psychosis when compared to those without epilepsy (adjusted HR 1.7; 95% Confidence Interval 1.1-2.7). The risk was especially high for non-schizophrenic psychoses (adjusted HR 3.1; 1.7-5.8), whereas epilepsy did not associate with schizophrenia spectrum diagnoses (adjusted HR 1.1; 0.6-2.1). Especially individuals with localization-related epilepsies developed commonly (9 of 74, 12.2%) psychotic disorders.

Conclusions: In our research we found that epilepsy increases risk for subsequent non-schizophrenic psychoses even when adjusted with other factors. Those with localization-related epilepsy were especially in risk. There are several possible mechanisms, including common genetic factors.

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Authors have nothing to disclose.

Figure. Hazard function for psychosis risk by epilepsy status.

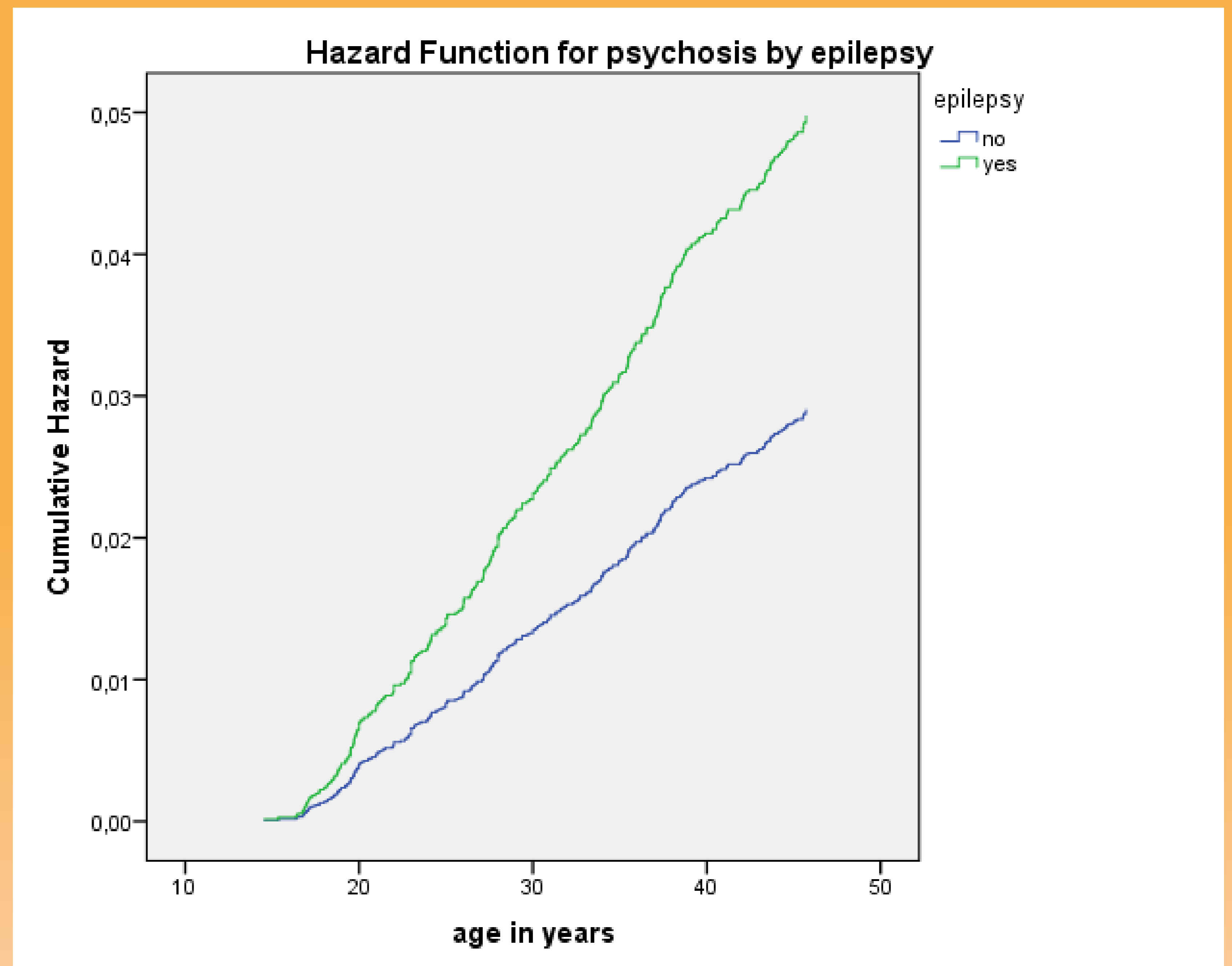


Table. Psychosis diagnoses by epilepsy type.

epilepsy type * psychosis diagnoses Crosstabulation					
	epilepsy type	psychosis diagnoses			Total
		no psychosis	schizophrenia broad	other psychosis	
	no epilepsy	10291 97.1%	205 1.9%	106 1.0%	10602 100.0%
	Localization-related epilepsy	65 87.8%	4 5.4%	5 6.8%	74 100.0%
	Generalized epilepsy	32 91.4%	2 5.7%	1 2.9%	35 100.0%
	Special epileptic syndromes	10 90.9%	0 .0%	1 9.1%	11 100.0%
	Unspecified epilepsies	200 95.2%	5 2.4%	5 2.4%	210 100.0%
	Status epilepticus	2 100.0%	0 .0%	0 .0%	2 100.0%
Total		10600 96.9%	216 2.0%	118 1.1%	10934 100.0%

References:

Bredkjaer SR, et al. Epilepsy and non-organic non-affective psychosis. National epidemiologic study. Br J Psychiatry 1998;172:235-8.
Wotton CJ, Goldacre MJ. Coexistence of schizophrenia and epilepsy: record-linkage studies. Epilepsia. 2012;53:e71-4.

