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Psychogenic non-epileptic seizures in children and adolescents – a Danish nationwide cohort study

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Background

Psychogenic non epileptic seizures (PNES):

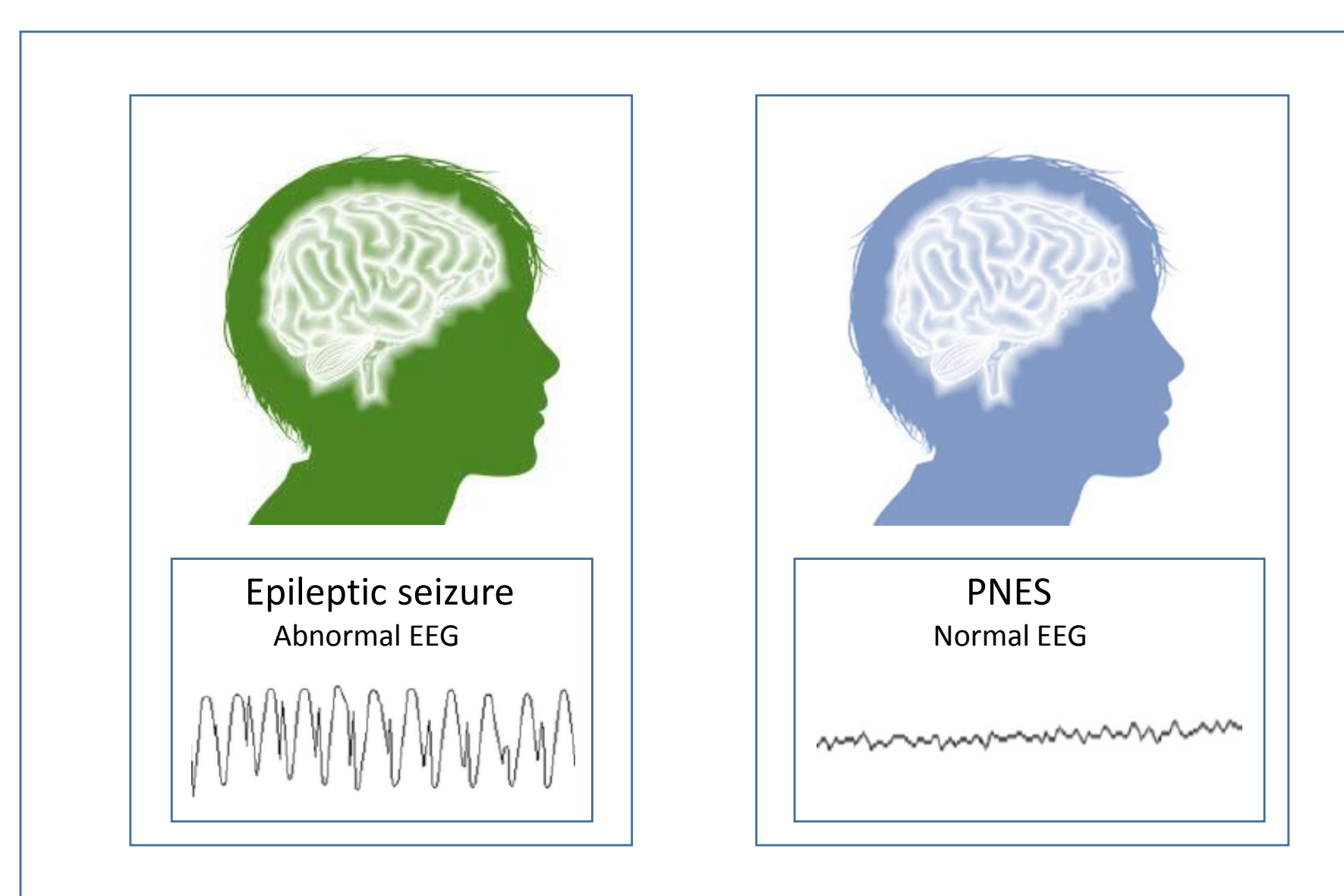
- Resemble epileptic seizures
- Are not associated with changes in electroencephalography
- Are considered as stressful and disabling as epileptic seizures
- The diagnostic management is complex and often delayed several years

The diagnostic challenge:

- **A misdiagnosis of epilepsy** can result in inappropriate and potentially harmful treatment
- **A misdiagnosis of PNES** can result in lack of treatment and risk of multiple epileptic seizures

Pediatric onset PNES:

- 5-15% of children and adolescents referred to epilepsy centers are diagnosed with psychogenic non-epileptic seizures
- Risk factors:
 - Often school difficulties or family adversity
 - Less physical and sexual trauma compared to adult PNES
- PNES are considered even more challenging to diagnose in children:
 - More comorbid epilepsy
 - Less classic PNES motor symptoms
- Incorrect treatment with antiepileptic drugs can impact learning abilities



Objectives & Aims

Lack of knowledge:

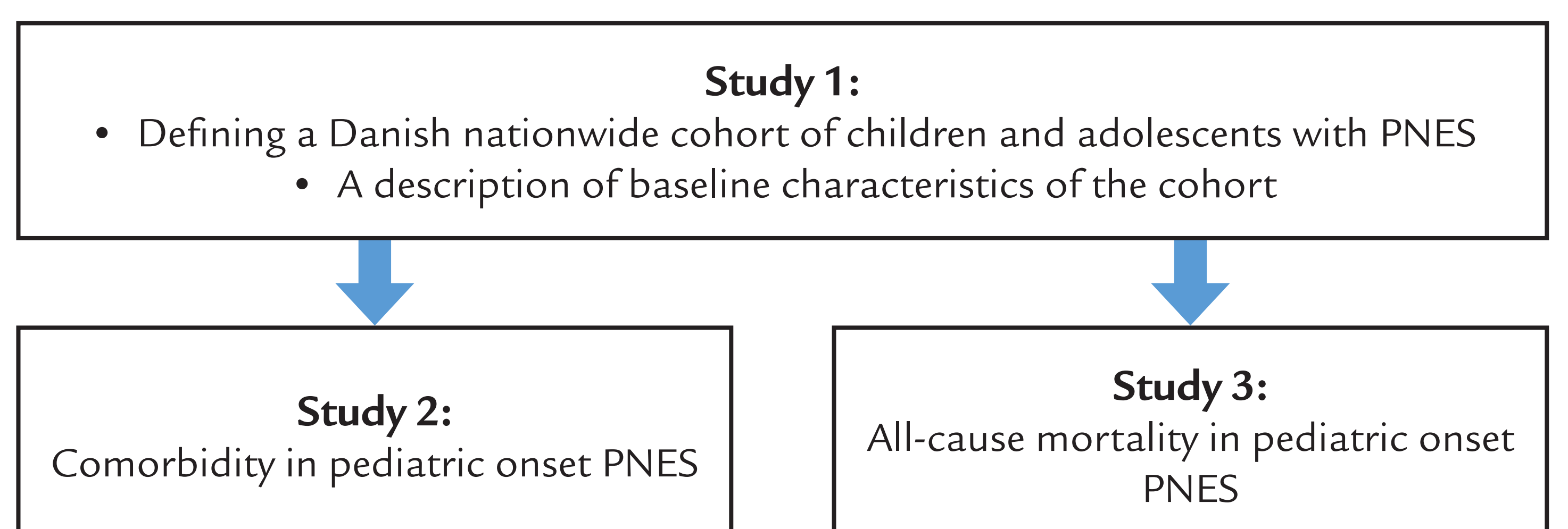
- Existing research primarily targets PNES in adults
- Prior research on children and adolescents is conducted with small study samples

Aim of the project:

- To describe characteristic features at onset of pediatric PNES and the course of disease for the disorder
- Achieve knowledge to inform future strategies for the diagnostic management of pediatric onset PNES

Methods

- The project is based on three studies
- The data is retrieved from the Danish national healthcare registries and from medical hospital records.



Methods - study 1:

Two steps:

1. Defining a Danish national cohort of children and adolescents with onset of PNES. By conducting an examination of medical records, we will identify which ICD-10 diagnoses covers pediatric PNES in the Danish healthcare registers.
2. Description of baseline characteristics of the defined PNES cohort. Data describing demographic and clinical characteristics will be retrieved from the medical records.

Methods – study 2 and 3:

An investigation of outcomes of pediatric onset PNES:

- **All-cause mortality:**
 - PNES cohort compared to age and gender matched controls diagnosed *with* epilepsy
 - PNES cohort compared to age and gender matched controls *without* a diagnosed epileptic or psychiatric disorder
- **Psychiatric and somatic comorbidity:**
 - PNES cohort compared to age and gender matched controls diagnosed with epilepsy

Perspectives

The knowledge gained in this project can be used to create future recommendations and guidelines regarding:

- the need for correct detection and targeted intervention to reduce morbidity and mortality in this group of patients
- the number of children and adolescents affected by the disorder and the extent of treatment efforts needed

Future studies

- Social consequences: use of health care services, use of medication, labour market status, use of social services.
- Predisposing riskfactors: living in an institution, divorce of parents, adoption, premature birth, educational level and labour market status of parents.

