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Baseline characteristics of pediatric onset psychogenic nonepileptic seizures (PNES)

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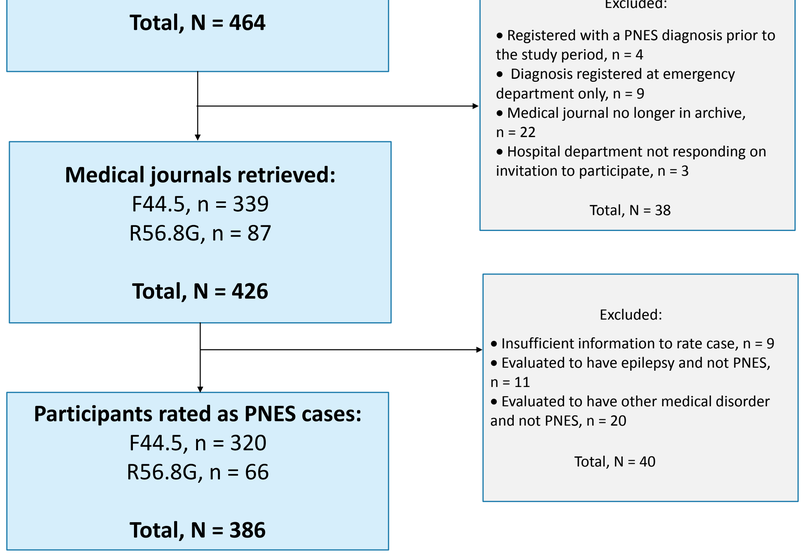
Objectives: Psychogenic nonepileptic seizures (PNES) mimic epileptic seizures with attacks of changes in voluntary movement or sensory function. Psychiatric management including psychoeducation and psychotherapy is the recommended care.
Pediatric onset PNES can be challenging to recognize in both the pediatric and psychiatric setting. A thorough examination with focus on the patient history, clinical information and semiology to support the electroencephalographic testing is recommended. Nevertheless, limited knowledge exists on the clinical characteristics of pediatric onset PNES, as prior studies have been conducted on adult populations or small samples of children.

Aim: To establish a cohort of children and adolescents with pediatric onset PNES with the primary aim of profiling clinical characteristics, including an investigation of possible differences when comparing pure PNES to mixed PNES (e.g. with comorbid epileptic seizures).

Methods: A nationwide cohort study of incident pediatric onset PNES based on register and medical record data in Denmark during the period January 1, 1996 to December 31, 2014. Children and adolescents aged 5-17 years registered with an incident diagnosis of Dissociative Seizures (ICD-10; F44.5) or of Other and Unspecified Convulsions, Non-Epileptic Seizures (ICD-10; R56.8G) in the Danish Healthcare registries were included. Case validity was assessed for each participant using medical record data. Data on clinical characteristics were extracted from the medical records.

Results: A total of 386 case validated children and adolescents with onset of PNES were included. A comorbid condition of epilepsy was confirmed for 55 cases (14.2 %). A history of both medical and psychiatric components as well as experienced negative life events was identified. Learning difficulties were frequently reported, with the mixed PNES group showing statistically significantly more intellectual disabilities (4.8 % vs. 27.3 %, $P < .001$).

Flowchart of the pediatric PNES cohort:



Preliminary results – please do not share

Baseline clinical characteristics of the pediatric PNES cohort:

Characteristic	All PNES	Pure PNES	Mixed PNES	P value
Total No.	386	331 (85.8 %)	55 (14.2 %)	
Female sex	322 (83.4)	274 (82.8)	48 (87.3)	.41
Age at diagnosis, median (min-max)	15.7 (5.4-17.9)	15.7 (5.4-17.9)	15.3 (9.6-17.9)	.37
Patient history of illness:				
Epilepsy	67 (17.4)	15 (4.5)	52 (94.6)	< .001
Psychiatric disorder	78 (20.2)	64 (19.3)	14 (25.5)	.30
Suicidal behavior	62 (16.1)	57 (17.2)	5 (9.1)	.13
Family history of illness:				
Epilepsy	32 (8.3)	25 (7.6)	7 (12.7)	.20
Psychiatric disorder	62 (16.1)	52 (15.7)	10 (18.2)	.64
Prior treatment:				
Epilepsy medicine	112 (29.0)	64 (19.3)	48 (87.3)	< .001
Psychopharmacological medicine	48 (12.4)	39 (11.8)	9 (16.4)	.34
Psychotherapy	98 (25.4)	82 (24.8)	16 (29.1)	.50
Specific trigger in context with onset	54 (14.0)	53 (16.0)	1 (1.8)	.005
Seizure in context with described stress	117 (30.3)	101 (30.5)	16 (29.1)	.83
Negative life events experienced, any	210 (54.4)	189 (57.1)	21 (38.2)	.009
Level of functioning:				
School problems	133 (34.5)	105 (37.7)	28 (50.9)	.006
Support in school	105 (27.2)	76 (23.0)	29 (52.7)	< .001
Low IQ	31 (8.0)	16 (4.8)	15 (27.3)	< .001
Learning difficulties	94 (24.4)	64 (19.3)	30 (54.6)	< .001

Preliminary results – please do not share

Conclusions: Pediatric onset PNES are most common in female teenagers, and clinical characteristics present a biopsychosocial profile, including a frequent report of experienced negative life events. Academic difficulties are frequently reported, and comorbid epileptic seizures are associated with higher rates of intellectual disabilities.

Clinical perspectives: The complex biopsychosocial profile underscores the need of a psychiatric evaluation, when managing pediatric onset PNES. Care pathways with collaborative management between the somatic and psychiatric setting are needed.

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Disclosures: None

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