MoCA and subgroup domain performance between groups.
Results: Six patients (13%), all with focal epilepsy of unknown cause, had positive NSAb panels (LGI1: n = 3; GAD65: n = 2; CASPR2: n = 1). There was no significant difference in overall MoCA scores between participants with focal epilepsy of unknown cause who were antibody positive versus negative, and antibody positive versus antibody negative lesional or generalized epilepsy. However, when analyzing by MoCA subgroup, we found that antibody positive patients performed significantly worse on delayed recall than antibody negative patients with focal epilepsy of unknown cause (Mdn = 1.5 vs 3), U(Nantibodynegative=27, Nantibodypositive=6) = 69.00, p = .02. There was no significant difference in other MoCA cognitive domain tests, and delayed recall scores did not significantly differ between antibody positive patients and those with lesional focal and generalized epilepsy.
Conclusions: These preliminary findings suggest that episodic memory impairment, as measured by delayed recall on the MoCA, may predict NSAb antibody positivity among patients with focal epilepsy of unknown cause. This may relate to specific predilection of the hippocampal regions in antibody-mediated epileptogenesis and pathology.

Categories: Epilepsy/Seizures
Keyword 1: autoimmune disorders
Keyword 2: memory disorders
Keyword 3: epilepsy / seizure disorders
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36 Naming in Monolingual and Bilingual Children with Epilepsy

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Objective: Word finding or “naming” difficulty is a symptom of multiple neurological disorders; therefore, naming assessment is an integral component of neuropsychological evaluation. Prior work has found weaker second-language naming in healthy proficient bilingual youth than monolingual youth, and similar findings have been shown in adults with epilepsy. Considering the potential influences of both early onset epilepsy and bilingualism on brain development, we compared naming in English second language (ESL) and monolingual youth with epilepsy. To assess the impact of bilingualism independent of the known effects of seizure laterality (i.e., poor naming in those with left, dominant-hemisphere seizures), we excluded patients with left language dominance and unilateral seizures. We hypothesized that like other groups, naming would be weaker in ESL than in monolingual youth with epilepsy.
Participants and Methods: Participants included 84 children with seizures that could not be lateralized clinically (n=36), bilateral seizures (n=20), centrotemporal spikes (n=3), and those with unilateral seizures and atypical language dominance (n=25), ages 6-15 years old: 66 monolingual, English (mean age: 10.87 ± 2.70 years) and 18 ESL (mean age: 10.78 ± 2.88 years). Those with FSIQ < 70 and vocabulary SS < 6 were excluded to ensure English proficiency. Independent samples t-tests, multivariate ANOVA, and chi-square tests compared groups on demographic factors and test performance. All measures (FSIQ, WISC/WASI Vocabulary, letter and category fluency, Children’s Auditory (AN) and Visual Naming (VN) Tests) were administered in English.
Results: Monolingual and ESL groups did not differ in: age, sex, SES, seizure type (i.e., non-lateralized, bilateral, centrotemporal spikes, or atypical language dominance), epilepsy onset age, or number of AEDs. Comparisons also showed no differences in FSIQ, vocabulary, letter fluency, or category fluency (all *p*s > 0.05). By contrast, auditory and visual naming performances were weaker among ESL patients than monolingual patients: AN accuracy, $F(1,81) = 10.89$, $p = 0.001$; AN tip-of-the-tongues (TOTs), $F(1,81) = 6.35$, $p = 0.014$; AN Summary Scores (SS), $F(1,81) = 6.17$, $p = 0.015$; VN accuracy, $F(1,81) = 4.66$, $p = 0.034$; VN SS, $F(1,81) = 4.87$, $p = 0.030$, with the exception of VN TOTs, which approached significance, $F(1,81) = 3.55$, $p = 0.063$.

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Conclusions: Consistent with findings in bilingual healthy youth and ESL adults with epilepsy, naming in ESL youth with epilepsy was weaker than in monolingual children. The groups did not differ on other aspects of language. Thus, unlike other expressive verbal functions, naming is adversely affected in the second language of bilingual people with epilepsy across the age span. These results suggest that poor naming in ESL patients cannot be used to infer a naming deficit, and/or left (dominant) temporal lobe dysfunction.

Categories: Epilepsy/Seizures
Keyword 1: bilingualism/multilingualism
Keyword 2: pediatric neuropsychology
Keyword 3: epilepsy / seizure disorders
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37 Cognitive Disengagement Syndrome (CDS; Sluggish Cognitive Tempo) in Pediatric Epilepsy

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Objective: Cognitive disengagement syndrome (CDS; previously known as "sluggish cognitive tempo" or SCT) refers to a set of behavioral symptoms characterized by slowed thinking/behavior, daydreaming, and mental fogginess or confusion. It has been described as related to, yet separate from, symptoms associated with Attention-deficit Hyperactivity Disorder (ADHD) inattention. There is a paucity of research on CDS within pediatric epilepsy populations despite substantial risk factors inherent to the disorder and a large proportion of patients with comorbid ADHD. This study therefore describes CDS as reported by parents for a large sample of children with epilepsy. Relationship between epilepsy variables (e.g., number of antiepileptic drugs [AEDs], seizure frequency, seizure type) and CDS symptoms was explored. Additionally, considering the negative association between CDS and academic performance in other populations, the relationship between parent-rated CDS and academic risk factors was examined.
Participants and Methods: Participants included 151 children with epilepsy (mean age = 11y, range 6-18y; 55% male; IQ>70), referred for outpatient neuropsychological assessment. As part of routine clinical care, parents completed the Penny Sluggish Cognitive Tempo Scale (SCT) and the Colorado Learning Difficulties Questionnaire (CLDQ). Scores and basic demographic information were extracted from an IRB approved clinical database; the IRB granted approval for retrospective chart review to extract additional medical variables. Parent report of CDS included total CDS score and three subdomains: Sleepy/Sluggish, Low Initiation, and Daydreamy. Higher scores represent greater parent-reported difficulties. Independent samples t-tests compared the participants' means on total CDS and each subdomain to the normative sample. Analysis of variance was conducted to determine differential impact of seizure type (Generalized, Focal, or Multifocal) on total CDS and each subdomain. Correlations between other medical variables, scores on the CLDQ, and parent ratings on the SCT were examined.
Results: Parents of children with epilepsy rated overall CDS total and subdomain scores as significantly higher compared to the normative means with highest elevation in symptoms of Low Initiation ($p = <.001$). Total CDS was associated with increased parent-reported academic difficulties; however, of the three subdomains, only Low Initiation was significantly associated with concerns for academic functioning. Number of AEDs was associated with increased symptoms on the Sleepy/Sluggish subdomain only. Seizure frequency was associated with total CDS and Sleepy/Sluggish symptoms, though this finding is likely mediated by increased number of AEDs for those with more frequent seizures. Seizure type was not associated with significant differences in Total CDS or CDS subdomains.
Conclusions: Children with epilepsy are at increased risk for experiencing slowed thinking and cognitive disengagement. Low initiation is particularly elevated in pediatric epilepsy populations, which may lead to increased academic difficulties. Potential interventions targeting low initiation may therefore have benefit in the academic setting for children with epilepsy, regardless of epilepsy type.

Categories: Epilepsy/Seizures

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