

suggests that these adults tend to have higher rates of depression and anxiety, lower rates of medication compliance, and lower education. Methods: To better understand this population and their struggles, a retrospective chart review of 58 patients transferred from pediatric to adult care was done. Results: 39.7% of participants were lost to follow-up; 12 were temporarily lost (average 1.3 years) and 11 were permanently lost. Twenty-three participants admitted to medication non-compliance, with fifteen having break-through seizures. Of the 45 patients that filled out mental health assessments at initial visit, 28.9% met the threshold for major depressive disorder, and 56.6% of patients had symptoms of anxiety. Data found that at one-year follow-up, 60% of these patients had similar or worsened depression scores, and 64% had similar or worsened anxiety scores. Conclusions: The findings of this study are concerning and highlight the need for greater education and support for these adolescents. Specifically, patients need more education on the importance of consistent follow-ups and consistently taking medication. Findings also suggest the importance of assessing and addressing mental health concerns.

P.033

Electrophysiological signatures of sedation in pediatric patients

M Grinberg (Hamilton) M Han (Montreal) K Jones (Hamilton) S Blain-Moraes (Montreal)*

doi: 10.1017/cjn.2024.140

Background: Sedation in PICU masks physical exam findings, leading to diagnostic challenges. In adult models, electroencephalography can evaluate the brain's response to sedation using feedforward connectivity and anteriorization of alpha hubs, proving useful for prognostication. Feasibility of model translation into pediatric population was assessed, with the hypothesis that the same markers of adaptive reconfiguration would correlate with a higher potential for recovering consciousness. Methods: Electroencephalograms from children undergoing sedation were analyzed for strength and direction of functional connectivity using the weighted and directed phase lag index. Target population was refined with an iterative inclusion criteria. We examined relationships between hub location reconfiguration, directed phase lag index, baseline Glasgow Coma Scale, and 3-month post-treatment Glasgow Outcome Scale-Extended. Results: Evaluation of 14 subjects showed promise in children aged 5-18 undergoing sedation with midazolam, dexmedetomidine, and propofol. Further analysis of five subjects revealed a correlation between adaptive reconfiguration during anesthesia and both higher baseline Glasgow Coma Scale and Glasgow Outcome Scale-Extended scores post-treatment. Conclusions: The findings indicate that the functional brain network connectivity model may have diagnostic and prognostic potential regarding children's consciousness levels. While the initial data is promising, further analysis of six additional cases is pending and deemed essential to thoroughly evaluate the model's efficacy.

P.034

Cost-effectiveness of treatment strategies for medically refractory pediatric epilepsy: a systematic review

P Tsai (Kitchener) VM Thirunavu (Evanston) S Govind (Evanston) L Zhang (Evanston)*

doi: 10.1017/cjn.2024.141

Background: Medically refractory pediatric epilepsy is a disorder that can cause significant financial and physical burden. Although multiple treatments exist, cost-effectiveness remains unclear. We conducted a systematic review to assess cost-effectiveness of treatments for medically refractory pediatric epilepsy and to summarize key issues and areas for further inquiry. Methods: We searched MEDLINE and 6 other databases up to July 2022. We included partial and full economic evaluations (EEs) on treatments for medically refractory pediatric epilepsy. Pairs of reviewers independently screened the literature, extracted data, and assessed quality using the 24-item Consolidated Health Economic Evaluation Reporting Standards (CHEERS) checklist. We extracted data on study characteristics, health outcomes, model design, costs, and treatment characteristics. Results: We identified 37 eligible studies for analysis, 19 of which were partial EEs and 18 were full EEs. Study quality, outcomes reported, treatment comparators, and factors included in cost calculations were common influential factors in study results. Vagus nerve stimulation and cannabidiol oil were the most consistently cost-effective, in 6 of 7 and 1 of 2 studies, respectively. Other treatments were inconsistently cost-effective. Conclusions: The cost-effectiveness of treatments for medically refractory pediatric epilepsy was not definitive. Consistency in study design and inputs is necessary for future comparison of epilepsy treatment.

P.035

Cardiac screening in children with genetic epilepsy at risk for sudden unexpected death in epilepsy

J Ezekian (Dallas) A Aschner (Toronto) L Zahavich (Toronto) R Hamilton (Toronto) E Donner (Toronto) A Bulic (Toronto)*

doi: 10.1017/cjn.2024.142

Background: People with epilepsy experience higher rates of cardiac arrhythmia and sudden death than the general population, with the highest risk in genetic epilepsies. Despite growing evidence of a possible cardiac contribution, routine cardiac screening for epilepsy patients is rarely performed. Methods: We performed a single center, retrospective review of patients with developmental epileptic encephalopathies caused by genetic variants expressed in the heart and brain. Clinical history, medications, age, and cardiac evaluation data were extracted. Results: Among 67 patients (56% female), 54 (81%) had at least one ECG. Twenty (37%) had an abnormal ECG. Forty-one had a repeat ECG: 8 showed persistent abnormalities, 7 resolution of abnormalities, and 7 a new abnormality. Five patients with an abnormality did not receive a follow up ECG. Two patients each