

## CHAIR'S SELECT ABSTRACTS - CHILD NEUROLOGY AND NEUROPHYSIOLOGY

### B.1

#### What Transition Skills Should be Targeted in Epilepsy Transition Clinics?

*S Healy (Ottawa) T Fantaneanu (Ottawa), S Whiting (Ottawa)\**  
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**Background:** Transition from pediatric to adult care can be a difficult time for adolescents with epilepsy. This period is often a period of extreme vulnerability and stress. As a result, research has recommended transition clinics to help these adolescents develop needed transition skills. However, the skills that need to be focused on remain unclear. **Methods:** Baseline transition skills in 113 adolescents with epilepsy, aged 14 to 18 (M= 16.46, male= 56) were analyzed. **Results:** Analyses showed that older adolescents showed significantly more transition skills than younger adolescents ( $F(4,108)=5.522$ ,  $p=000$ ). Although positive, older adolescents only scored, on average, 16.3/28 on the transition questionnaire; suggesting that many skills are still lacking, even at the time of transition. Specifically, although the majority of these older adolescents demonstrated being able to manage their condition independently (e.g., summarizing medical history, taking/knowing medications), these adolescents were less likely to demonstrate skills needed to be advocates for themselves and their health (e.g., asking questions, discussing concerns, speaking to the doctor instead of letting their parents). **Conclusions:** Results suggest it may be beneficial to restructure adolescent clinic visits; encouraging these patients to attend the initial portion of visits independently to help them feel more comfortable and confident championing for themselves.

### B.2

#### Neurologic outcome trajectory following neonatal arterial ischemic stroke (NAIS): A longitudinal observational study

*M Slim (Toronto) E Pullenayegum (Toronto) A Aziz (Oakville) N Dlamini (Toronto) D MacGregor (Toronto) G deVeber (Toronto), M Moharir (Toronto)\**

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**Background:** Studies evaluating long-term neurologic outcomes following NAIS are scanty. We aimed to study the emergence pattern of neurologic deficits following NAIS. **Methods:** Neonates diagnosed with AIS were prospectively enrolled and outcomes were evaluated using the validated Pediatric Stroke Outcome Measure-Severity Classification Scheme. Neurologic outcomes were classified as normal/mild, moderate or severe. Trend analysis was conducted using Cochran-Armitage test. **Results:** A total of 126 neonates (59% males) were followed for a median of 5.2 years (IQR:3.4-6.4 years). The proportion of children classified as normal/mild declined from 94% to 76% >5 years post-stroke ( $p<0.01$ ). Moderate and severe outcomes increased from 5% to 15% and 1% to 8% ( $p=0.01$ ), respectively. Sensorimotor, language and cognitive deficits emerged in 16%,

14%, and 17% of enrolled neonates, respectively. Of those who had normal/mild outcomes at baseline, 83 remained stable throughout the study. Improvement in neurologic outcomes was seen in 8 children. Thirty-five neonates had emerging deficits at one point during follow-up. Congenital heart disease predicted the emergence of deficits (odds ratio=3.3, 95% confidence interval:1.01-10.5). **Conclusions:** Emerging deficits following NAIS are not uncommon and can equally manifest in sensorimotor, language or cognitive domains. Thus, long-term follow-up and close monitoring of outcomes following NAIS is crucial.

### B.3

#### The incidence of perinatal stroke is 1:1200 births in Southern Alberta: Population-based incidence of disease-specific perinatal stroke

*M Dunbar (Calgary)\* J Hodge (Calgary) A Floer (Calgary), A Kirton (Calgary)*

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**Background:** Perinatal stroke encompasses six cerebrovascular syndromes which occur between the 20<sup>th</sup> week of gestation and the 28<sup>th</sup> post-natal day. Subtypes are neonatal arterial ischemic stroke (NAIS), neonatal cerebral sinovenous thrombosis (CSVT), neonatal hemorrhagic stroke (NHS), arterial presumed perinatal ischemic stroke (APPIS), periventricular venous infarction (PVI), and presumed perinatal hemorrhagic stroke (PPHS). Inconsistent terminology and lack of population-based case series has limited accurate measurement of disease-specific perinatal stroke incidence. Our objective was to define the incidence of the subtypes of perinatal stroke using a population-based cohort. **Methods:** The Alberta Perinatal Stroke Project is a research cohort established in 2008 in Southern Alberta. Case acquisition included retrospective hospital and ICD code searches (1990-2008) and prospective enrollment from all NICU and neurology/stroke clinics (2008-2017). **Results:** The overall incidence of perinatal stroke in Southern Alberta was 9.0 cases per 10,000 births, or 1:1200 births. Per 10,000 births, the incidence of each subtype was: NAIS = 3.2 (~1:3000), APPIS = 1.2 (~1:8500), PVI = 1.5 (~1:6500), CSVT = 1.0 (~1:9900), NHS = 1.4 (~1/7300), PPHS = 0.1 (1/82,000). **Conclusions:** The overall incidence of perinatal stroke in Southern Alberta is 1:1200 live births. Population-based sampling of disease-specific states may explain why this rate is much higher than previous estimates

### B.4

#### Use of Health Care Resources by Pediatric Headache Patients: A population-based cohort study In the Province of Alberta

*T Rajapakse (Edmonton)\* J Bakal (Edmonton) J Mailo (Edmonton) M Nabipoor (Edmonton) J Kassiri (Edmonton), L Richer (Edmonton)*

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**Background:** Headache is a prevalent and disabling condition in children. It is a frequent cause of medication and health resource use in children. We examined the incidence and nature