

score, respectively. Conclusions: All aspects of the SNAP score had negative and steeper slopes prior to neurological decline, whereas only 'voice' in GCS had a negative trend. These findings suggest that the SNAP tool may be useful in earlier identification of acute decline. Ongoing prospective studies are underway.

NEUROMUSCULAR DISEASE AND EMG

P.072

Alberta Spinal Muscular Atrophy Newborn Screening (SMA-NBS) – 2022 results

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Background: Spinal muscular atrophy (SMA) is a progressive neuromuscular disease caused by biallelic mutations of the *survival motor neuron 1 (SMN1)* gene. Early diagnosis via newborn screening and presymptomatic treatment are essential to optimize health outcomes for affected individuals. Methods: We developed a multiplex real-time polymerase chain reaction assay using dried blood spot samples for the detection of homozygous deletion of exon 7 of the *SMN1* gene. Newborns who were screened positive were seen urgently for clinical evaluations. Copy numbers of *SMN1* and *SMN2* genes were determined by multiplex ligation-dependent probe amplification for confirmatory testing. Results: From February 28, 2022 to December 31, 2022, 42,450 newborns were screened in Alberta. Four infants had abnormal screen results and were subsequently confirmed to have SMA. No false positive newborns were detected. Three infants received adeno-associated virus serotype 9 (AAV9)-mediated *SMN1* gene replacement therapy <31 days of age. One infant received *SMN2*-splicing modulator treatment due to maternally-transferred AAV9 neutralizing antibodies prior to gene therapy at 3 months of age. Conclusions: The estimated incidence of SMA in Alberta is 9.4 (95% CI: 2.5 – 24.1) per 100,000 live-births. During the first year of the SMA-NBS program, 4 asymptomatic infants received treatment and demonstrated excellent developmental progress to date.

P.073

Mapping a national Duchenne muscular dystrophy registry to the International Classification of Functioning, Disability, and Health

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Background: Duchenne muscular dystrophy (DMD) is an X-linked disease that causes progressive muscle wasting. The

Canadian Neuromuscular Disease Registry (CNDR) DMD subset collects data focused on body structure and function. Our objective is to develop a broader dataset including the priorities of those living with DMD in accordance with the International Classification of Functioning, Disability, and Health (ICF) – a framework for describing disease and health functions developed by the World Health Organization. Methods: Clinically relevant ICF categories for DMD were identified and reviewed by two independent committees including two patients and six parent representatives. The Delphi approach was used to narrow ICF categories to a core set representative of DMD, which will be mapped to the CNDR-DMD subset. Results: With full result expected by the conference, the mapping of the ICF to the CNDR-DMD subset will identify data collection priorities in the four domains of functioning and disability: body functions and structures, activities at the level of the individual, participation in all areas of life, and environmental factors. Conclusions: The ICF can be used to identify data collection priorities. Broadening the CNDR-DMD subset will foster future research to include outcome measures important to patients and families affected by DMD.

NEUROVASCULAR AND NEUROINTERVENTIONAL

P.074

Risk factors for perinatal arterial ischemic stroke (PAIS): A machine learning approach

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Background: Perinatal arterial ischemic stroke (PAIS) is a leading cause of hemiparetic cerebral palsy. Multiple risk factors are associated with PAIS but studies are limited by small sample sizes and complex interactions. Unbiased machine learning applied to larger datasets may enable the development of robust predictive models. We aimed to use machine learning to identify risk factors predictive of PAIS and compare these to the existing literature. Methods: Common data elements of maternal, delivery, and neonatal factors were collected from three perinatal stroke registries and one control sample over a 7-year period. Inclusion criteria were MRI-confirmed PAIS, term birth, and idiopathic etiology. Random forest machine learning in combination with feature selection was used to develop a predictive model of PAIS. Results: Total of 2571 neonates were included (527 cases, 2044 controls). Risk factors uniquely identified through machine learning were infertility, miscarriage, primigravida, and meconium. When compared, factors identified through both literature-based selection and machine learning included maternal age, fetal tobacco exposure, intrapartum fever, and low

5-minute APGAR. Conclusions: Machine learning offers a novel, less biased method to identify PAIS predictors and complex pathophysiology. Our findings support known associations with concepts of placental disease and difficult fetal transition and may support early screening for PAIS.

OTHER CHILD NEUROLOGY

P.075

Pediatric intracranial tuberculoma: case report and review of literature

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Background: Tuberculosis is an airborne disease caused by *Mycobacterium Tuberculosis*. Intracranial tuberculoma is a rare complication of extrapulmonary tuberculosis due to hematogenous spread to subpial and subependymal regions. Intracranial tuberculoma can occur with or without meningitis. **Methods:** A 3-year-old male who recently emigrated from Sudan presented to the emergency department with right-sided seizures lasting 30 minutes which were aborted with levetiracetam and midazolam. CT head revealed a multilobulated left supratentorial mass, with solid and cystic components measuring 8.0 x 4.8 x 6.5 cm. The patient had successful surgical resection of the mass which was positive for *Mycobacterium Tuberculosis*. He was started on rifampin, isoniazid, pyrazinamide, ethambutol, and fluoroquinolone and discharged home in stable condition. **Results:** Literature review on pediatric intracranial tuberculoma was performed which included 48 studies (n=49). The mean age was 8.8 ± 5.4 years with slight female predilection (59%). Predominant solitary tuberculomas (63%) were preferentially managed with both surgical resection and antitubercular therapy (ATT) compared to multifocal tuberculomas that were preferentially managed with ATT. **Conclusions:** Intracranial tuberculoma is a rare but treatable cause of space-occupying lesions in children. Clinicians should maintain high-level of suspicion in patients from endemic regions and involve infectious disease service early in patient's care.

P.076

Tone management: an environmental scan of current management practices across Canada

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Background: Currently, there are no standardized approaches to care or evaluation for tone dysfunction in

Canada. The study authors hypothesize that there is significant practice variation across the country. This environmental scan is aimed to describe the current practice for management of patients with hypertonia across Canada. **Methods:** A web-based survey was developed by the authors with a multi-disciplinary approach and sent to representative rehabilitation sites in each province. All statistical analyses were performed using the R statistical software version 4.0. **Results:** CP was found to be the most common diagnosis for tone dysfunction, with 58% (7/12) of sites diagnosing greater than 20 new patients per year. All 12 sites offered oral baclofen and gabapentin, and 92% of sites offered trihexyphenidyl. Botulinum toxin injections were offered at 50% of sites. Upper and lower extremity procedures were offered in 83% of the sites. In 8 of 12 sites (67%), patients were seen within a formal multidisciplinary clinic to manage hypertonia. **Conclusions:** The information gained from this study provides some insight into the current practice across Canada for children with hypertonia. This study may assist in the development of a national, standardized strategy to tone management, potentially facilitating more equitable access to care for patients.

P.077

Telemedicine in pediatric neurology: a survey of patient and provider experience

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Background: Prior to the pandemic, telemedicine use was limited and sparsely funded within Ontario. During the pandemic, a shift in clinical recommendations and government funding models promoted telemedicine. We aim to highlight both quantitative and qualitative aspects of the patient and provider experience over 2.5 years within a Canadian Pediatric Neurology clinic. **Main objectives of the study are to assess the safety, efficiency and convenience of telemedicine.** **Methods:** A REDCap survey was sent to all patients with a telemedicine appointment from March 2020 –September 2022 and all Pediatric Neurology providers. Survey included a 5-point Likert scale questions, open questions, and patient characteristics. **Results:** Responses received from 272 patients and 7 providers. 91% of patients and all providers were satisfied with telemedicine. 95% of patients and all providers felt they received or were able to provide safe/adequate care. 90% of patients and all providers reported that telemedicine was more convenient. 87% of patients and all providers were interested in future appointments via telemedicine. **Conclusions:** Our survey shows patients and providers had highly positive experiences with telemedicine – reporting care was adequate, safe, and more convenient. This data supports incorporating telemedicine into future care and advocates that Canadian regulations/billing codes to continue to support telemedicine.