

www.cpsp.cps.ca/surveillance. **Results:** Eleven cases were reported in 2020. Five (45%) cases were reported from Ontario and the remaining cases were reported from Atlantic Canada and Western Canada. Their median age was 12 months (IQR 6–21); 64% were male. The most common presenting symptoms were delayed motor milestone and hypotonia in 7 (64%) cases. On average, the diagnosis was delayed after the onset of symptoms by three months for SMA Type 1, by eight months for Type 2, and by 18 months for Type 3. Eight (73%) cases received nusinersen as their first disease-modifying treatment. **Conclusions:** Early recognition and newborn screening are essential to reduce diagnostic delay and enable timely treatment of SMA. Other data sources including the Canadian Neuromuscular Disease Registry and molecular genetic laboratories will be used to estimate the annual incidence of pediatric SMA in Canada.

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A Population-based Study of the Epidemiology, Healthcare Resource Utilization and Costs of Duchenne Muscular Dystrophy in Alberta, Canada

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Background: Duchenne muscular dystrophy (DMD) is a severe progressive neuromuscular disease. This study aimed to estimate the prevalence, healthcare resource utilization (HRU), and medical costs of DMD in Alberta. **Methods:** This retrospective study linked provincial healthcare administrative data to identify patients with DMD utilizing a modified diagnostic code algorithm, including males <30 years of age. Five-year (April 2012 to March 2017) prevalence estimates were calculated and all-cause direct HRU and costs were examined in the first-year post-diagnosis. **Results:** Overall, 111 patients (median age: 12.0 years (IQR 4.7-18.3)) with DMD were identified. The estimated five-year period prevalence was 35.72 (95% CI 31.88-39.91) per 100,000 persons. All-cause HRU in the first-year post-diagnosis included a mean (SD) of 0.48 (1.19) hospitalizations (length of stay: 9.37 days (36.47)), 3.96 (6.16) general practitioner visits, 28.52 (62.98) specialist visits, and 20.14 (16.49) ambulatory care visits. Mean (SD) all-cause direct costs were \$18,868 (\$29,206) CAD in the first-year post-diagnosis. **Conclusions:** Patients with DMD had multiple interactions with the healthcare system in the year following diagnosis, resulting in substantial direct medical costs. More effective treatment strategies are needed to improve health outcomes and reduce the burden of DMD.

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Benign tumors of peripheral nerves in children at a tertiary-care pediatric hospital

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Background: Tumors affecting peripheral nerves in children are rare. Accurate diagnosis ensures that management is appropriate and timely. **Methods:** We review the clinical presentation and utility of investigations of children with intrinsic tumors affecting peripheral nerves at the Children's Hospital of Eastern Ontario (CHEO). **Results:** From 2009-2019, 14 cases were identified. Mean age of symptom onset was 8.2 years (range 0.3 to 17.3 years). Presenting symptoms included painless muscle wasting (2/14), focal muscle weakness (7/14), contracture (1/14), pain (1/14) or a painless, palpable mass (3/14). MRI was useful at differentiating benign pediatric nerve tumors. Peripheral nerve lipomatosis demonstrated a classic "spaghetti string" appearance. Patients with perineurioma showed evidence of enhancing, nodular lesions while intraneural ganglionic cysts display cystic lesion within the nerve. Neurofibromas appear like a "bag of worms" while schwannomas are more eccentrically positioned around the nerve. Nerve conduction studies (NCS) or electromyography (EMG) were performed in 11/14 patients. Biopsies were performed in 9 patients and surgical management in 4 patients. **Conclusions:** The rare nature of peripheral nerve tumors in children can pose diagnostic challenges. NCS/EMG are important to assist with localization, and MRI important at distinguishing benign tumors. Key MRI, clinical and NCS features can guide management, potentially avoiding invasive procedures.

NEUROVASCULAR, STROKE AND NEUROINTERVENTIONAL

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Vessel Wall Imaging of Unusual Childhood Strokes: a Pediatric Case Series

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Background: MR-based vessel wall imaging (VWI) has gained influence in the clinical investigations, and management of pediatric strokes. Limitations still exist in interpreting it as a singular modality. **Methods:** We present 4 pediatric stroke cases