also no association between the degree of microdissection and manipulation of sensory rootlets, nor the total percentage of rootlets cut, and the incidence of dysesthesia, probably because of our institution's conservative approach to SDR and the practice to not cut greater than 50% of rootlets.

Poster 448

Concurrent Acute Disseminated Encephalomyelitis and Guillain-Barré Syndrome in a Child: A Case Report.

Radha Korupolu, MBBS, MS (University of Kentucky, Lexington, KY, United States); Nawaz Hack, MD; Sara S. Salles, DO.

Disclosures: R. Korupolu, No Disclosures.
Case Description: The patient presented to our tertiary care hospital with tetraparesis demonstrating more weakness in lower extremities than upper extremities and areflexia 1 week after a middle ear infection. Magnetic resonance imaging (MRI) of the brain and spine showed T2 hyperintense signals in bilateral thalamus and spinal cord. Cerebrospinal fluid analysis revealed elevated protein and leukocyte levels. These findings were consistent with acute disseminated encephalomyelitis (ADEM). After minimal response to 5 days of intravenous steroids, she was treated with 5 days of intravenous IgG. Subsequent nerve conduction studies performed due to persistent areflexia suggested acute motor-sensory axonal neuropathy, a rare variant of Guillain-Barré syndrome (GBS). Repeat MRI of spine showed increased enhancement of multiple spinal nerve roots and cauda equina, compatible with the diagnosis of GBS. The concomitance of ADEM and GBS is unusual and notable.
Program Description: Patient: A 5-year-old girl with acute tetraparesis.
Setting: Tertiary care pediatric hospital and acute inpatient rehabilitation hospital.
Results or Clinical Course: On day 22, at admission to inpatient rehabilitation, she exhibited neuropathic pain in extremities and persistent tetraparesis with no involvement of bladder and bowel. Her balance was poor, and she required total assistance for transfers and activities of daily living. She was non-ambulatory. She was treated with gabapentin for neuropathic pain and received intensive rehabilitation during a 27-day inpatient stay. At discharge, her sitting balance was fairly improved, and she was able to perform upper and lower body dressing with minimal assistance, although she required maximum assistance for transfers. She was able to ambulate in a seated walker with minimal assistance and propel a wheelchair with supervision. She was discharged to home with continued rehabilitation services via home health.
Conclusions: To our knowledge, simultaneous ADEM and GBS is rare. Little evidence in the literature addresses functional recovery in children with this diagnosis. Multidisciplinary team work, early and intensive inpatient rehabilitation, and continuum of care appears to be critical in such cases.

Poster 449

Ketotic Hypoglycemia in RYR-1 Central Core Myopathy: A Case Report.

Robert Trotter, BS (University of Michigan, Ann Arbor, MI, United States); James Dowling, MD, PhD; Joseph E. Hornyak, MD, PhD.

Disclosures: R. Trotter, No Disclosures.
Case Description: The case is a young boy with central core myopathy from an RYR-1 mutation. At 30 months of age he presented to the emergency center at a tertiary care children's hospital with lethargy, irritability and an episode of emesis. Initial work up revealed critical hypoglycemia with initial blood glucose levels of 12 and 16 mg/dL (normal range 50-130 mg/dL). Urine was positive for ketones at 15 mg/dL (normally 0).
Setting: Tertiary care children's hospital/Neuromuscular disease clinic.
Results or Clinical Course: Patient was then stabilized with intravenous glucose infusion and responded well while hospitalized and discharged home in good condition after 5 days. A comprehensive infectious and endocrinologic work up during hospitalization and as an outpatient did not reveal any cause for the hypoglycemia. Patient subsequently has had several episodes of symptomatic hypoglycemia, including a preoperative fast. Treatment has consisted of frequent feedings and avoidance of fasting.
Discussion: Ketotic hypoglycemia is a relatively rare disorder of unknown cause. Hypoglycemia has been reported in a few neuromuscular diseases, possibly associated with low muscle mass and thus limited glycogen reserves for the fasting state. It is unclear how the underlying genetic defects in the various neuromuscular diseases may impact glycogen metabolism directlly.
Conclusions: Children and adults with neuromusuclar diseases may be at increased risk for morbidity and mortality associated with ketotic hypoglycemia. This may be related to low muscle mass and reduced glycogen stores, as well as the underlying genetic defect. Periods of fasting may trigger an acute event, which healthcare professionals, patients and caregivers should be aware.

Poster 450

Improvement of Throwing Motion with Commercially Available Virtual Reality Sports Games in Hemiplegic Cerebral Palsy Patients, Pilot Study.

Sang-Jee Lee, (Daejeon St Mary's Hospital, Daejeon, Korea, Republic of); Eun-Seok Choi, M.D., PhD.

Disclosures: S. Lee, No Disclosures.
Objective: To evaluate the changes in throwing motion after virtual reality training in hemiplegic cerebral palsy patients.
Design: Pilot study.
Setting: University rehabilitation hospital.
Participants: 10 hemiplegic cerebral palsy patients, aged 4-13 years, with GMFCS level 1-2.
Interventions: The subjects participated in 90 minutes per week for 6 weeks of occupational therapy sessions of discus throwing, bowling, goal keeping using commercially available virtual reality games in addition to standard occupational therapy.
Main Outcome Measures: Maximum acceleration, velocity at swing using Dartfish ProSuite. Biceps, triceps and deltoid muscle depths by ultrasonography. Subscale of Melbourne Assessment of Unilateral Upper Limb Function (MULL), Bruininks-Oseretsky Test of Motor Proficiency (BOTMP), Goal keeping score and modified motor activity log for the game. All outcomes were measured before and after intervention.
Results: Mean peak velocity before and after intervention was 11.29 ± 5.94 (m/sec) and 17.39 ± 11.87 ($P<.05$), respectively. Mean maximum acceleration before and after intervention was 212.26 ± 192.08 (m/sec^2) and 415.46 ± 423.07 ($P<.05$), respec-