

detected (~30%), with subdural more common than extradural hemorrhages. The odds of having an ICH was significantly higher with instrumental delivery (3.75%). Conclusions: This shows that prevalence of ICH is relatively high in symptomatic children. Measured prevalence varies according to the type of modality used for screening.

## CLINICAL NEUROPHYSIOLOGY (CSCN)

### EPILEPSY AND EEG

#### P.049

##### Acetazolamide use for myoclonus: case report of 2 patients with progressive myoclonic epilepsy and literature review

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Background: Cortical myoclonus originates at cerebral cortex, predominantly occurring on voluntary movements. Few case reports described usage of Acetazolamide (ACZ) for myoclonus. Methods: Chart review of 2 patients was performed. Literature review was conducted on myoclonus and ACZ using Pubmed. Results: 22-year-old female was diagnosed with Progressive Myoclonic Epilepsy (PME) secondary to a KCNC1 mutation. Her symptoms started at 10 years old with bilateral tonic clonic seizures (BTCS), later developing progressive ataxia and myoclonus, involving face and limbs, which worsened with stimulus and menses. Medications included Perampanel, Clonazepam and Levetiracetam, however myoclonus was still limiting. At the age of 19, ACZ 250 mg BID was started for 2 weeks around her menses. Follow up revealed significant improvement of myoclonus, resulting in better ambulation, balance and speech, sustained 2.5 years after. 67-year-old male presented BTCS at the age of 53 along with cortical myoclonus, dementia and ataxia, leading to diagnosis of PME with a mutation on IRF2BPL. Improvement of myoclonus occurred with ACZ 250 mg BID biweekly, although balance and cognition still deteriorated. Conclusions: Previous literature outlines 4 cases of action myoclonus that responded to ACZ. We believe that ACZ should be considered to treat myoclonus, especially in cases with cortical involvement and hormonal fluctuations.

#### P.050

##### Spike source localizations between the three non-REM sleep stages: resemblances to wakefulness and distinctions from REM sleep

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Background: Sleep-wake states (SWS) affect the expression of interictal epileptiform discharges (“spikes”), which

affects resultant source localization calculations used in epilepsy evaluation. We hypothesize that spike localizations from non-REM sleep 1-3 are most concordant with one another. Methods: We used Standardized low-resolution brain electromagnetic tomography (sLORETA) in Curry 8 software to calculate source localization voxels of spikes in N1-3, REM, or wakefulness (W). We assessed voxel concordance between N1-N2-N3/N1-N2-W/N1-N3-W/N2-N3-W/REM-N1-N2/REM-N1-N3/REM-N2-N3/REM-N1-W/REM-N2-W/REM-N3-W. We classified concordances into those containing and not containing a SWS (e.g. N1 vs. not-N1 = N1-N2-N3/N1-N2-W/N1-N3-W/REM-N1-N2/REM-N1-N3/REM-N1-W vs. REM-N2-W/REM-N3-W/REM-N2-N3/N2-N3-W) for comparison. Results: Concordances did not differ for N1-3 or W. However, concordances with REM were lower than those without REM as a fraction of source localization space (median 32.1% vs. 56.1%,  $p < 0.001$ ) and cortical grey matter (median 20.4% vs. 27.3%,  $p = 0.003$ ). Conclusions: As expected, source localizations from spikes in N1, N2, and N3 did not significantly differ from one another because these three states are constituent members of non-REM sleep. Surprisingly, however, source localizations derived from awake spikes – not a constituent of non-REM sleep – also did not differ. In contrast, REM was most different by reproducibly exhibiting the least three-way concordance. These findings reinforce the unique localizing ability of REM sleep.

## MOVEMENT DISORDERS

#### P.051

##### Parkinson’s disease tremor can show entrainment and distractibility with tapping test

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Background: Electrophysiological tests such as the tapping test are used to distinguish functional and organic tremors, in which patients with functional tremor commonly show entrainment and amplitude reduction (>50% decrease relative to baseline) of contralateral tremor during tapping. While these features are suggested to be specific to functional tremor, the tapping test in Parkinson’s disease (PD) tremor has not been tested. Methods: We evaluated 18 PD patients (2F, age  $64.17 \pm 7.30$  [mean  $\pm$  SD] years) with rest and postural tremors using surface electromyography and triaxial accelerometry. Patients were recorded while tapping at 1, 3 and 5 Hz with the contralateral arm at rest or outstretched. Tremor amplitude and frequency were calculated using power spectrum analysis from accelerometer recordings. Results: Reduction of rest tremor amplitude was observed in 3/18 patients during 1 and 3 Hz tapping. Reduction was seen in 3/16 and 1/16 patients with postural tremors at 1 and 3 Hz tapping, respectively. Frequency shifts (>1.5 Hz) were observed in 3/18 rest tremors and 6/16 postural tremors. Seven patients exhibited rest and/or postural tremor entrainment during 3 or 5 Hz tapping. Conclusions: Distractibility and entrainment can be found in PD

tremor. The tapping test may not reliably distinguish between PD tremor and functional tremor.

## MS / NEUROINFLAMMATORY DISEASE

### P.052

#### Utility of amyotrophic lateral sclerosis functional rating scale (ALSFRS) bulbar subscores for predicting need for gastrostomy tube

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**Background:** We evaluated the utility of the Amyotrophic Lateral Sclerosis Functional Rating Scale (ALSFRS) in predicting risk of gastrostomy tube (G-tube) insertion in patients with ALS. **Methods:** We conducted a retrospective study using the Pooled Resource Open-Access ALS Clinical Trials Database. People with ALS, at least two ALSFRS scores, and baseline swallowing subscore >1 were included. G-tube outcome was defined as reaching a swallowing subscore ≤1. Predictors were ALSFRS bulbar subscores (swallowing, speech, salivation). Survival analyses estimated median time to outcome and cumulative probability of outcome within 91 days. Individuals were censored at last ALSFRS score. **Results:** We included 6,943 participants. Median [95% CI] time to G-tube insertion was 245 [228, 285], 562 [547, 621], and 1,268 [980, 1,926] for baseline swallowing subscores of 2, 3, and 4, respectively. Probability of G-tube insertion was associated with baseline swallowing, speech, and salivation subscores (log-rank test  $p < 0.0001$ ). For patients who transitioned to a swallowing subscore of 2 or 3, 18.1% [95% CI 16.1, 20.3] and 1.9% [95% CI 1.3, 2.7] required G-tube insertion within 91 days of score transition. **Conclusions:** ALSFRS bulbar subscores may identify patients at risk of G-tube insertion. Probability of G-tube insertion within 91 days is low if swallowing subscore ≥3.

## NEUROMUSCULAR DISEASE AND EMG

### P.053

#### Concomitant corticosteroid use in ravulizumab-treated adults with anti-AChR antibody-positive gMG: results from the CHAMPION MG open-label extension

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**Background:** Treatment of generalized myasthenia gravis (gMG) with reduced steroid dosages may minimize steroid-associated

AEs. Corticosteroid dosage changes were not permitted during the 26-week, CHAMPION MG study of ravulizumab in adults with anti-acetylcholine receptor antibody-positive (AChRAB+) gMG. Participants who completed the study could receive ravulizumab in the open-label extension (OLE; NCT03920293); corticosteroid adjustments were permitted. **Methods:** Patients could receive intravenous ravulizumab (blind induction or bridging dose at Week 26 [OLE start] for those previously receiving placebo or ravulizumab, respectively, then 3000–3600 mg at Week 28 and every 8 weeks thereafter) for ≤4 years. **Results:** Among 161 patients (78 ravulizumab, 83 placebo) who entered the OLE and received ravulizumab for ≤164 weeks, 113 received oral or enteral corticosteroids during the OLE; the proportion treated with >10 mg/day corticosteroids decreased from 58% (n=66) at first OLE dose to 37% (n=42) (35 [31%] received ≤5 mg/day and 71 [63%] received ≤10 mg/day) at last reported dose. Fourteen patients (12%) discontinued corticosteroids. The mean (SD) corticosteroid dosage/patient decreased from 17.5 (11.9) mg/day at first OLE dose to 11.7 (10.9) mg/day at last assessment. **Conclusions:** Ravulizumab decreased corticosteroid use in patients with AChRAB+ gMG, suggesting a steroid-sparing role for ravulizumab.

### P.054

#### Long-term safety and efficacy of zilucoplan in myasthenia gravis: additional interim analyses of RAISE-XT

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**Background:** Zilucoplan, a macrocyclic peptide complement component 5 inhibitor, sustained efficacy for up to 60 weeks of treatment, with a favourable safety profile in patients with acetylcholine receptor autoantibody-positive generalised myasthenia gravis in an interim analysis of RAISE-XT (NCT04225871). We evaluate the safety and efficacy of zilucoplan up to 96 weeks. **Methods:** RAISE-XT, a Phase 3, multi-centre, open-label extension study, included patients who participated in the double-blind Phase 2 (NCT03315130) and Phase 3 (NCT04115293) zilucoplan studies. Patients self-administered daily subcutaneous zilucoplan 0.3mg/kg injections. Primary outcome was incidence of treatment-emergent adverse events (TEAEs). Secondary outcomes included change from baseline in Myasthenia Gravis Activities of Daily Living (MG-ADL) score. **Results:** At data cut-off (11 May 2023), median (range) exposure to zilucoplan was 1.8 (0.11–5.1) years (N=200). TEAEs occurred in 191 (95.5%) patients; the most common TEAE was COVID-19 (n=64; 32.0%). At Week 96, mean (standard error) change in MG-ADL score from double-blind study baseline was –6.33 (0.49) and –7.83 (0.60) for patients who received zilucoplan 0.3mg/kg and placebo in the double-blind studies, respectively. **Conclusions:** Zilucoplan demonstrated a favourable long-term safety profile. Efficacy was sustained for 96 weeks in