Results There was a significant reduction in TEP P60 inhibition for ALS patients (-16.1%±9.3) compared to controls (-43.5%±10.5,P=0.032) when examined within the inhibitory paradigm. Changes in ALS P60 inhibition were correlated with the rate of disease progression, denoted by both the rate of monthly decline in the ALSFRS-R since symptom onset (R^2=0.31,P=0.048), and the rate of increase in upper motor neurone features, expressed as the UMN Score, (R^2=0.3195, P=0.035).

Conclusions Data from TMS-EEG directly demonstrate dysfunction of cortical inhibitory circuits is present in ALS patients at an early clinical stage. Dysfunction of GABA-ergic circuits appears to be proportional to disease disability and the rate of disease progression. Interventions aimed at modulating these cortical circuits may prove therapeutically useful.

2353 FIRST SEIZURE CLINICS: AN IMPACTFUL INTERVENTION

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Objectives To investigate the consequences of failure to attend (FTA) or delayed attendance at first seizure clinics (FSCs).

Methods Retrospective cohort study of patients referred to two FSCs in Melbourne between January 2008–December 2017. Patients' records were linked to state-wide hospital administrative databases up to June 2018.

We applied regression models to identify clinicodemographic factors associated with FTA, and to assess whether FTA, and/or time between FSC referral and attendance, influenced subsequent hospital utilisation.

Results 1458 eligible patients were referred to the study FSCs. 840 (58%) attended with a median 44 days (interquartile-range [IQR]: 18–91) between referral and attendance. 324 (22%) cancelled/rescheduled, and 294 (20%) failed to attend without notice.

Increased risk of FTA was associated with younger age (adjusted relative risk [aRR]=2.48; 95% confidence interval [CI]:1.70–3.63, p=0.001) and greater relative socioeconomic advantage (aRR=1.47; 95% CI:1.08–2.01, p=0.02).

FTA was associated with increased subsequent all-cause hospital admission (adjusted incidence rate ratio [aIRR]=2.69; 95% CI:2.06–3.50, p<0.001), all-cause ED attendance (aIRR=2.66; 95% CI:2.05–3.44, p<0.001), and seizure-related presentations (aIRR=2.34; 95% CI:1.63–3.37, p<0.001).

Delayed FSC attendance was similarly associated with increased subsequent all-cause hospital admission (aIRR=1.05 per month of delay; 95% CI:1.03–1.06, p<0.001), all-cause ED attendance (aIRR=1.07; 95% CI:1.05–1.08, p<0.001), and seizure-related presentations (aIRR=1.03; 95% CI:1.03–1.04, p<0.001).

Conclusion FSCs are an effective healthcare intervention for improving outcomes, as FTA and delayed attendance are associated with significantly increased subsequent hospital utilisation. Understanding barriers to timely FSC access is an important future direction for first seizure care.

2354 HEREDITARY NEUROPATHY WITH LIABILITY TO PRESSURE PALSIES (HNPP): TWO CASES HIGHLIGHT THE ELECTROPHYSIOLOGICAL VARIABILITY AND ASSOCIATED DIAGNOSTIC CONUNDRUM

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Method Case report

Objective We present two cases highlighting the variability of electrophysiological phenotype with HNPP creating a diagnostic conundrum given other potential causes of neuropathy.

Results Case 1: A 28-year-old woman presented with a two-week history of left foot drop. She frequently crossed her legs. Electrophysiology identified left fibular neuropathy with two compressive sites – at the fibular head and the anterior tarsal tunnel. She also displayed asymptomatic median neuropathy at the wrist. The remainder of the study did not show evidence of a generalised peripheral neuropathy, with normal conduction velocities elsewhere.

Case 2: A 64-year-old woman presents with a right foot drop post trivial trauma, in the setting of well-controlled Type 2 Diabetes. Electrophysiology exhibited peroneal neuropathy at the right fibular head, with incidental median neuropathy at the wrists. Additionally, her nerve conductions showed a generalised large fibre mixed peripheral neuropathy with slowed motor conduction in the intermediate range.

Conclusively, deletion in chromosome 17 p12 inclusive of PMP22 gene was identified in both cases confirming the diagnosis of HNPP.

Conclusion Whilst compressive neuropathies at common sites is frequently noted in HNPP, other electrophysiology parameters can vary considerably; from normal to generalized peripheral neuropathy/demyelination.

In cases with neuropathy following trivial trauma, multiple compressive neuropathies at common compressive sites, or at multiple sites along a single nerve, clinicians should maintain a high index of suspicion for diagnosis, even in older patients and with co-morbidities such as Diabetes.

2359 OPTIMISING PATIENT SELECTION FOR MUSCLE BIOPSY IN A GENERAL NEUROLOGY SETTING

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Objectives We aimed to assess the diagnostic utility of a muscle biopsy in a general neurology setting, and to identify strategies to improve patient selection.

Methods The clinical records and histology reports of adult patients who underwent a muscle biopsy at Wellington Hospital, New Zealand, between February 2004 and December 2020, were retrospectively examined. Their clinical, laboratory, and electromyography findings, histology results, and pre- and post-biopsy diagnoses were recorded. Based on the findings, strategies for optimising patient selection have been proposed.

Results Eighty-four patients underwent a muscle biopsy during this period, with a mean age of 57.9 years; 47.6% female. A