the percentage of IVIg used for CNS indications within neurology almost doubled in British Columbia (BC), Canada. Clear local guidelines may guide rational use. Methods: Consensus guidelines for IVIG use for CNS indications were developed by a panel of subspecialty neurologists and the Provincial Blood Coordinating Office, informed by focused literature review. Guidelines were structured similarly to existing BC peripheral nervous system guidelines and Australian Consensus Guidelines. Utilization and efficacy will be monitored provincewide on an ongoing basis. Results: Categories of conditions for Conditionally Approved (N=11) and Exceptional Circumstance Use (N=5) were created based on level of evidence for efficacy. Dosing and monitoring recommendations were made and outcomes measures defined. Rationale for Not Indicated conditions (N=2) was included. Guidelines were distributed to BC neurologists for feedback. This system will be re-evaluated after 1 year. Conclusions: IVIG use in CNS inflammatory conditions has an emerging role. Guidelines for use and monitoring of outcomes will help improve resource utilization and provide further evidence regarding effectiveness.

NEURO-ONCOLOGY

P.109

Isolated central nervous system lymphoma in the inpatient setting: a case series

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Background: Isolated central nervous system lymphomas (CNS-L) has non-specific clinical presentations causing delays in diagnosis and treatment. This retrospective case series aims to characterize these challenges in the inpatient setting. Methods: Chart review of biopsy-proven CNS-L cases (n=10) presenting to Vancouver General Hospital from 2018-2020: diffuse (8/10) and intravascular (2/10) large B-cell lymphomas were included. Results: Median age was 69 years (31-83); 50% were female; 9/10 immunocompetent, 1/10 had well-controlled HIV. Neurologic symptoms at presentation: ataxia (7/10), paresis (4/10), dysphagia (4/10), dysarthria (2/10), and cognitive decline (4/10). Median time from symptom onset to admission with paresis, ataxia, dysphagia, or dysarthria was 3 days (1-14), compared to 84 days (28-384) with transient/vague symptoms. Median time from admission to biopsy was 25 days (5-148). 4/10 received steroid prior to biopsy. 1/10 had solitary lesion on MRI, 8/10 had ≥2 lesions. Diagnosed on lumbar puncture (0/10), skin biopsy (1/10), vitreous biopsy (1/10), brain biopsy (8/10), autopsy (1/10). 4/10 survived, 6/10 died; median time from admission to mortality was 133 days (61-342). Conclusions: Many factors lead to delays in diagnosis and treatment of CNS-L, including non-specific clinical presentations and time to brain biopsy for definitive diagnosis. Earlier recognition and reducing biopsy delays may help achieve earlier diagnosis.

NEUROIMAGING

P.111

In vivo hippocampal mGluR5 abnormalities predict MTLE post-surgical outcome

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Background: PET imaging of [11C]ABP688 shows reduced hippocampal mGluR5 availability in mesial temporal lobe epilepsy (MTLE) patients, however the relation with post-surgical outcomes is unclear. Here, we tested whether [11C]ABP688 binding in hippocampal subfields vulnerable to glutamate excitotoxicity is related to post-surgical outcome. Methods: [11C]ABP688-PET was obtained from 31 unilateral MTLE patients and 30 controls. Hippocampal subfields were automatically segmented into 1) CA1-3, 2) CA4/dentate gyrus (DG), 3) Subiculum and manually corrected. Partial volume corrected [11C]ABP688 non-displaceable binding potential (BP_{ND}) was calculated in the subfields and compared between seizure-free and non-seizure-free patients. Results: [11C]ABP688 BP_{ND} was significantly reduced in ipsilateral CA1-3 & CA4/DG (p<0.001) compared to controls. No difference was seen in Subiculum. Ipsilateral CA1-3 [11C]ABP688 BP_{ND} was lower in seizure-free (p=0.012; Engel Ia, n=13) vs non-seizure- free (Engel Ic-III, n=10) patients, and this effect was independent of subfield volume. In a subset of patients with [18F]FDG-PET, CA1-3 [11C]ABP688 BP_{ND} was significantly lower in seizure-free patients (p=0.03), while no difference was found for [18F]FDG uptake. Conclusions: Reduced CA1-3 mGluR5 availability was associated with post-surgical seizure-freedom independent of atrophy and hypometabolism. Thus, [11C]ABP688-PET may offer a potential biomarker for surgical outcomes and may be particularly relevant for pre-surgical workup in MRI- and [18F]FDG-negative MTLE patients.

NEUROMUSCULAR DISEASE AND EMG

P.112

Clinical and Electrophysiological characteristics of anti-nodal/paranodal antibodies in chronic inflammatory demyelinating polyradiculoneuropathy patients

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Background: CIDP is an autoimmune polyneuropathy. Antibodies against the Node of Ranvier have been described, NF155, NF140/186 and contactin-1. Methods: A retrospective review of patients with CIDP who tested positive for antinodal/paranodal

antibodies via Western blot were evaluated. We have included 20 sero-negative CIDP patients. All patients met definite or probable EFNS criteria. clinical, electrophysiological data and response to treatment were obtained. Results: Forty-five patients tested positive for the antibodies. Sixteen were positive for NF155,11 for NF140, 5 for CNTN1,11 were double positive for NF155 and NF140, and 3 were triple positive for NF155, NF140 and CNTN. Age of onset was similar in both seronegative (53.9 ± 3.1 yrs.) versus seropositive(52.3 ± 2.4 yrs.).Chronic presentation manifested in 85% of seronegative, 80% of seropositivepatients.Intrestingly,all triple-positive patients presented with a more acute presentation(i.e,<8 wks.)7/20 seronegative (35%),1/16 NF155, 6/11 NF140,1/5 contactin, 2/11 of doublepositive, 3/3 of triple-positive (28%,13/46) responded to IVIg. Conclusions: No major clinical or electrophysiological differences between groups. triple-positive patients showed 100% response to IVIg.These results cast doubt on the specificity of the Western blot as a clinico-electrophysiologic discriminator. Future testing with cell-based assays will likely provide a robust measure that will guide treatment decision.

NEUROVASCULAR AND NEUROINTERVENTIONAL

P.113

Time metrics and clinical outcomes of thrombectomy in acute stroke patients before and after implementation of COVID-19 infection protocols in six Canadian stroke centres

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Background: The coronavirus disease 2019 (COVID-19) pandemic has led the implementation of institutional infection control protocols. This study will determine the effects of these protocols on outcomes of acute ischemic stroke (AIS) patients treated with endovascular therapy (EVT). Methods: Uninterrupted time series analysis of the impact of COVID-19 safety protocols on AIS patients undergoing EVT. We analyze data from prospectively collected quality improvement databases at 6 centers from March 11, 2019 to March 10, 2021. The primary outcome is 90-day modified Rankin Score (mRS). The secondary outcomes are angiographic time metrics. Results: Preliminary analysis of one stroke center included 214 EVT patients (n=150 pre-pandemic). Baseline characteristics were comparable between the two periods. Time metrics "last seen normal to puncture" (305.7 vs 407.2 min; p=0.05) and "hospital arrival to puncture" (80.4 vs 121.2 min; p=0.04) were significantly longer during pandemic compared to pre-pandemic. We found no significant difference in 90-day mRS (2.0 vs 2.2; p=0.506) or successful EVT rate (89.6% vs 90%; p=0.93). Conclusions: Our results indicate an increase in key time metrics of EVT in AIS during pandemic, likely related to infection control measures.

Despite the delays, we found no difference in clinical outcomes between the two periods.

NEURORADIOLOGY (CSNR) NEURO-ONCOLOGY

P.115

Diagnostic performance of machine learning based MR algorithm vs conventional MR images for predicting the likelihood of brain tumors

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Background: MRI forms an imperative part of the diagnostic and treatment protocol for primary brain tumors and metastasis. Though conventional T1W MRI forms the basis for diagnosis at present, it faces several limitations. Machine learning (ML) algorithms require less expertise and provide better diagnostic accuracy. Methods: A systematic review of PubMed, Google Scholar, and Cochrane databases along with registries through 1980-2021 was done. Original articles in English evaluating Conventional MRI or ML algorithms. Data was extracted by 2 reviewers and meta-analysis was performed using bivariate regression model. Results: The study protocol was registered under PROSPERO. Twelve studies with 1247 participants were included for systematic analysis and three studies for meta-analysis. ML algorithms had better aggregate sensitivity and specificity (80%, 83.14%) than Conventional MRI (81.84%, 74.78%).The pooled sensitivity, specificity, DOR for the studies were 0.926 (95% CI, 0.840-0.926), 0.991 (95% CI, 0.955-0.998) and 1446.946 (312.634-6692.646) with AUC=0.904 under HSROC. On subgroup analysis, MRS and Random Forest Model had highest sensitivity and specificity (100%,100%;100%,100%), DSC MRI and Deep Neural Network had highest AUC (0.98,0.986). Conclusions: ML algorithm has superior diagnostic performance and faster diagnostic capability once trained than conventional imaging for brain tumors. It has immense potential to be the standard of care in the future.

NEUROIMAGING

P.116

Not everything is what it seems, look closer, think deeper: granulomatosis with polyangiitis

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Background: Granulomatosis with polyangiitis (GPA) is a rare disease of unknown cause. The multitude of manifestations