

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 seropositive patients. Interestingly, 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 double positive, 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