in a case of anti-NMDA encephalitis during which there was absence of extreme delta brush and ictal EEG patterns. This observation may provide insight into the ongoing debate over whether extreme delta brush is an ictal EEG pattern.

Neuromuscular Disease and EMG

P.081

Critical illness neuropathy and clinical correlates in severely burned patients

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Background: Reported incidence of critical illness neuropathy (CIN) in burn patients is between 7-41%. **Methods:** Retrospective review including patients admitted to quaternary ICU for burn injuries between 2010-16. Variables include demographics, burn and neurologic characteristics, EMG reports, and measurements of illness severity. Patients with and without neuropathies were compared. **Results:** Of 147 patients admitted to ICU, thirteen had EMG studies and eight met CIN criteria. Five had electrophysiological CIN evidence, three had clinical diagnosis. Six EMGs focused on upper limb injuries only, insufficient to diagnose CIN. One patient was diagnosed with critical illness myopathy and nine had superimposed focal mononeuropathies or plexopathy. CIN patients had a mean of larger burns (TBSA 63% vs 21%), more operations (8 vs 2) and escharotomies performed (63% vs 12%), longer ICU admissions (23 vs 9 days), longer ventilation (28 vs 8 days), higher revised Baux score (101 vs 76) and initial APACHE II scores (21 vs 15) than those without. **Conclusions:** CIN was identified in 5.4% of burn patients admitted to ICU, lower than previously reported in literature, and associated with higher illness severity. CIN may be under recognized if not screened for. Unit examinations should include screening neurological measures and indicated EMGs to evaluate for CIN.

Neuroradiology (CSNR)

Neuroimaging

P.083

Radiology reporting of low-grade glioma growth underestimates tumor expansion

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Background: Surveillance by serial magnetic resonance imaging (MRI) is important in the management of diffuse low-grade gliomas (LGGs). Radiological interpretations of LGG scans, however, are typically qualitative and difficult to use clinically. **Methods:** We retrospectively compared radiological interpretations of LGG growth/stability to volume change measured by manual segmentation. Tumour diameter was measured to evaluate methods for assessing glioma progression, including RECIST criteria, Macdonald/RANO criteria, and mean tumour diameter/ellipsoid method. **Results:** Tumours evaluated as stable by radiologists grew a median 5.1 mL (11.1%) relative to the comparison scan. Those evaluated as having grown increased by 13.3 mL (23.7%). Diameter-based measurements corresponded well but tended to overestimate segmented volumes, and overestimation error increased with tumour size. Agreement with segmented volume improved from a mean difference of 17.6 to 4.5 to 3.9 mm for diameter and from 104.0 to 25.3 to 15.9 mL for volume with measurements in one, two, and three dimensions. **Conclusions:** Given evidence that LGG volume and growth are prognostic factors, lesions should be accurately measured. Current radiological reporting workflows fail to appreciate and communicate the true expansion of LGGs. Volumetric analysis remains the gold standard for growth assessment, but diametric measurements in three dimensions may be an acceptable alternative.

Neurovascular, Stroke and Neurointerventional

P.085

Perioperative endovascular procedure utilization in transsphenoidal surgery patients at two tertiary-care academic centres

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Background: Utilization of endovascular procedures in the perioperative management of patients undergoing transsphenoidal surgery is uncommon but plays a critical role in preventing and treating potentially life-threatening vascular complications. **Methods:** We performed a retrospective review of all patients over a 10-year period who underwent transsphenoidal surgery at two tertiary-care institutions and identified all pre-operative and post-operative endovascular procedures performed. **Results:** 18 perioperative endovascular procedures were performed including 9 pre- and 9 post-operative. Pre-operative procedures included balloon-test occlusion (n=4), aneurysm coiling (n=4), and parent artery occlusion (n=1). One aneurysm coiling was complicated by coil migration requiring coil retrieval with a snare device and one balloon-test occlusion was complicated by pituitary apoplexy. Pituitary apoplexy following balloon-test occlusion has not been reported and the potential pathophysiology is reviewed. Post-operative procedures included embolization for epistaxis (n=2) and embolization with or without parent artery sacrifice for carotid and anterior cerebral artery vascular injury (n=7). Arterial vascular injury was managed with coil embolization and/or with detachable balloons. Review of anatomical features predisposing to vascular injury are discussed. **Conclusions:** Patients undergoing transsphenoidal surgery should be managed with a multidisciplinary team ensuring that endovascular treatment options are made available during the perioperative period.