radiologically isolated syndrome (pwRIS) and to evaluate their association with markers of adverse clinical outcomes. Methods: Epstein-Barr nuclear antigen 1 (EBNA1) and viral capsid antigen (VCA) titres were quantified in a cohort of 47 pwRIS and 24 healthy controls using Enzyme-Linked Immuno-Sorbent Assay. Plasma glial fibrillary acidic protein (GFAP) and neurofilament light protein (NfL) were measured using single-molecule array. MRI lesion metrics and the development of MS symptoms over time were also evaluated. Results: EBNA1 titres were higher pwRIS compared to healthy controls (p=0.038), while VCA titres were not (p=0.237). A positive correlation was observed between EBNA1 titres and plasma GFAP in pwRIS (p=0.005). Neither EBNA1 nor VCA titres correlated with NfL. MRI lesion measures and the development of MS symptoms did not show any significant relationship with EBNA1 or VCA titres. Conclusions: Eelevated EBNA1 titres are detectable prior to MS symptom onset and correlate with GFAP, a biomarker associated with worse clinical outcomes. However, their role in disease progression and clinical outcomes requires further investigation.

P.018

24-year-old woman post-partum with subacute paresthesias and facial diplegia

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Background: Facial diplegia with paresthesias (FDP) is a rare Guillain-Barré Syndrome (GBS) variant, characterized by subacute onset of bilateral facial palsy with no other motor weakness, absent reflexes and distal paresthesias, that may be associated with anti-ganglioside autoantibodies. Methods: Patient chart, including medical notes, radiologic, electrophysiological and laboratory testing during the patient's hospitalization in December 2024 were reviewed. Results: We report the case of a 24-year-old woman, who presented one-week post-partum with a history of tongue and progressive distal extremity paresthesias, headache and gait instability. During hospitalization patient progressively developed bilateral lower limbs areflexia and facial diplegia. Imaging was negative for a central cause but lumbar puncture and clinical examination guided the diagnosis of FDP. Patient responded to a course of intravenous immunoglobulins (IVIg) and was discharged home without any weakness. Conclusions: This case illustrates the rarer FDP presentation of GBS, which can be more frequent in the postpartum period, and explores the differential diagnosis of subacute facial diplegia.

Neurocritical Care

P.020

Transcranial doppler for risk assessment of subarachnoid hemorrhage

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Background: Vasospasm is an important complication of subarachnoid hemorrhage (SAH). Attempts to identify patients at highest risk of vasospasm have not led to practice change. We sought to identify patients at lowest risk of vasospasm by testing the prognostic utility of novel low risk criteria: mean MCA velocities on TCD that peaked and remained below 120 cm/s by the 7th day. Methods: Retrospective observational study of TCD values in patients admitted to The Ottawa Hospital with SAH 2018-2023. The primary outcome was presence of moderate to severe vasospasm (MCA mean velocity >160 cm/s) by day 21. Results: Data were collected on 211 patients, of whom 197 fulfilled inclusion criteria. Only 2 of 104 patients (2%) meeting our low-risk criteria developed the primary outcome, compared to 48 of 93 patients (52%) who did not meet criteria (RR 27). The Negative Predictive Value (NPV) for vasospasm in our low-risk group was 98%. Conclusions: Our low-risk criteria based on TCD patterns in the first 7 days after SAH can identify patients at very low risk of vasospasm with great accuracy. This could inform a future prospective study.

Neuroimaging

P.021

Hyperglycemia presenting with visual hallucinations due to occipital lobe seizures

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Background: Hyperosmotic hyperglycemic nonketotic state (HHS) is associated with myriad neurological complications such as seizures. Methods: We report a case presenting with visual

hallucinations due to occipital lobe epilepsy. Results: A 67-year old woman with chronic hypertension, hyperlipidemia and diabetes mellitus non-compliant to medication presented with a 10-day history of recurrent visual phenomena in the left visual field. She described stationery multi-coloured flashing lights which decreased in intensity, brightness and size after 3 minutes. She was alert and conscious during attacks. There was no limb jerking. Neurological examination was normal with no visual field defect. Capillary glucose was 28.1 mmol/L, Hba1c 9% and B-hydroxybutyrate < 0.1. She was treated with actrapid 8 units, glipizide 5 mg BD and empagliflozin 12.5 mg OM. Interictal electroencephalogram was normal with no epileptiform activity. Brain magnetic resonance imaging revealed restricted diffusion in the right occipital cortex with corresponding cortical thickening and increased FLAIR signal with subtle hypodensity on GRE sequence. Her visual symptoms improved dramatically with hydration and diabetic control. She was treated with a short course of keppra. Conclusions: Visual hallucinations are an uncommon but well recognised and fully reversible complication of HHS. Clinicians should not forget HHS in the workup of occipital lobe epilepsy.

P.023

Impact of repeated nonconcussive hits on neurophysiological parameters in collegiate football athletes

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Background: A nonconcussive injury occurs from an impact to the head that does not result in overt symptoms. However, growing evidence suggests that the accumulation of nonconcussive impacts can result in neurological symptoms, either due to injury to the blood vessel or as a result of altered neural functioning. Despite this, the effects of repeated nonconcussive impacts on cerebral blood flow (CBF) and cerebrovascular reactivity (CVR) remain unclear. Methods: Twenty Canadian male collegiate football athletes were imaged at three time points: pre-, mid-, and post-season (3T Siemens Prisma) with arterial spin labelling (CBF) and a blood oxygen level-dependent sequence during which hypercapnia was induced (CVR; RA-MR, Thornhill Medical, Toronto, CA). Results: Significant changes in CBF and CVR were observed at both mid- and post-season compared to pre-season baseline measurements. Conclusions: Alterations in CBF and CVR may precede the emergence of neurocognitive symptoms later in life that may be associated with repetitive nonconcussive impacts. These findings highlight the potential of CBF and CVR as early biomarkers for trauma-related brain changes in contact sports. Future studies should investigate the long-term consequences of these physiological alterations and implement player safety protocols designed to reduce the prevalence of nonconcussive impacts.

Neuroscience Education

P.024

Supporting the transition from trainee to independent neurologist: development of a transition-to-practice clinic for senior neurology residents

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Background: Under Competence by Design (CBD), there are required training experiences (TEs) and entrustable professional activities (EPAs) in the Transition to Practice (TTP) stage. Limited literature exists to support an evidence-based approach to its implementation and evaluation. We created a novel outpatient rotation for PGY5 neurology residents, simulating independent practice and addressing the TTP TEs. Methods: We conducted a needs assessment with informal interviews of senior residents, the program director, and program administrator of our neurology residency program. Guided by Royal College requirements, and available TTP-focused literature, we designed a general neurology clinic run by PGY5 neurology residents. Focuses included increased independence and efficiency, longitudinal follow-up, and applied principles of practice management. Results: Go-live was August 1, 2024. Eight PGY5 residents completed one block, with a second scheduled later in the academic year. Eleven supervisors participated across two sites. Surveys and structured interviews will be used for both groups to evaluate the program, based on the Kirkpatrick Model. Conclusions: Development of a dedicated clinic addressing the TTP TEs in CBD is feasible. Iterative evaluation of the structure, delivery and outcomes of this required TE is critical to ensure that objectives are met and value is added to the residency curriculum.

Neurotrauma

P.026

Structural deficits with preserved kinematic performance after sport-related concussion

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Background: Identifying white matter abnormalities after acute concussion is challenging due to variable microstructural changes and individual imaging limitations. Combining diffusion tensor imaging (DTI) and neurite orientation dispersion and density imaging (NODDI) improves sensitivity to alterations.