

**P.053****Insights from the first eighteen months of CBME implementation across Canadian neurology residency training programs**

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**Background:** Canadian neurology residency programs recently transitioned to Competence Based Medical Education (CBME), designed to provide residents with stage-appropriate learning to develop and demonstrate competence. The successful implementation of CBME requires iterative evaluation as the adoption process may differ from the intended design due to systemic or program-specific factors. This study aims to (1) examine the variability in CBME implementation across Canadian neurology residency programs; (2) determine the barriers toward uptake of CBME; and (3) identify the benefits and pitfalls of CBME in neurology residency programs. **Methods:** A separate national survey was developed for residents and staff neurologists who participated in CBME for at least six months. Surveys were distributed through email, and responses were anonymized. Quantitative data were analyzed by response frequency and mean, where applicable. Free-form responses were analyzed qualitatively. **Results:** Staff neurologists felt prepared for CBME, but were divided on its fairness and impact on education quality. Residents experienced frequent but not necessarily timely or high-quality feedback. Barriers to implementation included increased paperwork, dissatisfaction with online platforms used to facilitate CBME, and bidirectional burden of initiating evaluations. **Conclusions:** Staff and residents have expressed unique perspectives on the first iteration of CBME. There remain opportunities for improvement in subsequent iterations.

**P.054****Effects of cerebellar Theta Burst Stimulation (TBS) on working memory**

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**Background:** Recent evidence suggests that the cerebellum is involved in cognitive functions. Theta burst stimulation (TBS), a modality of transcranial magnetic stimulation (TMS), on the cerebellum can change its contribution to working memory. Therefore, we hypothesize that excitatory intermittent TBS (iTBS) on the cerebellum would improve performance on working memory tasks, whereas inhibitory continuous TBS (cTBS) would disrupt it. **Methods:** As this is an ongoing study, nine participants (6 women) took part in this study so far. TBS was applied on the cerebellum bilaterally. All subjects received iTBS, cTBS, and sham iTBS in three sessions in random order. After TBS in each session, participants performed three types of working memory tasks: letter 2-back, digit span forward (DSF), and digit span backward (DSB). **Results:** The preliminary results

suggest that participants performed better in the sham condition in the letter 2-back and the DSB tasks compared to the iTBS and cTBS conditions, but the results did not reach statistical significance due to the small sample size. **Conclusions:** The preliminary results show that the cerebellar contribution to working memory may be disrupted by TBS. As we gain more statistical power by recruiting more participants, we hope to further demonstrate the effects of cerebellar TBS on working memory.

**NEUROVASCULAR AND  
NEUROINTERVENTIONAL****P.055****Efficacy and safety of using standardized size of stents in patients with carotid artery stenosis**

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**Background:** Carotid artery stenosis causes up to 20% of ischemic strokes. Stenting is used as an alternative to endarterectomy in symptomatic patients. Most centers customize each individual stenosis to a specific stent size. However, this process can be time consuming and costly while the relative benefit has not been well evaluated yet. We hypothesized that a 'one-size-fits-all' approach to carotid stenting results in non-inferior results to a customized approach. **Methods:** We conducted a descriptive retrospective cohort study on patients who underwent carotid artery stenting looking for peri- and post-procedural complications. The primary outcomes were periprocedural (within 24 hours) or post procedural (within 30 day) TIA, stroke, or death. The secondary outcome was the estimated degree of stenosis on follow up ultrasound performed within 6 months of the procedure. **Results:** The complication rate was 4.5%, 6.5% for 24 hours and 30 day post-procedure, respectively. Age and degree of stenosis on post procedural cerebral angiogram were associated with increased risk of complication. Severe restenosis or occlusion was reported in 16.8% of patients within 6 months post-procedure. **Conclusions:** Our study suggests that using a simplified, one-size-fits-all, approach to carotid stenting results in safe and effective outcomes, suggesting a route to possibly simplify a complex medical procedure.

**P.056****Basilar artery stenting in hyperacute stroke: a systematic review of published cases**

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**Background:** Basilar artery stenting is a rescue therapy in the management of hyperacute stroke. Published data on efficacy and safety are limited. **Methods:** A systematic review of published

studies was performed in accordance with PRISMA guidelines. Inclusion criteria were adult patients with ischemic stroke with permanent basilar artery stent placement within 48 hours of onset. Data were extracted by two independent reviewers. Additional cases from our institution were identified via a local stroke registry. Results: Of 212 screened articles, patient-level data was reported in 35 studies (93 individuals) and six additional patients were included from our registry. Patients (n=99, 63% male; median age 64) most often presented with mid-basilar occlusion (52%) and 76% received treatment within 12 hours of onset. Favorable angiographic results occurred in 67%. The final modified Rankin Scale score (mRS) was 0-3 for 56% of patients; mortality was 29%. Those with complete flow post-procedure were more likely to have a final mRS of 0-3 (p=0.05). Conclusions: In 99 cases of basilar stenting in hyperacute stroke, favourable angiographic and functional outcomes were reported in 67% and 56% of patients, respectively. International multi-center registries are required to establish benefit and identify patient and technical factors that predict favorable outcomes.

## OTHER ADULT NEUROLOGY

### P.057

#### When you hear hoofbeats, think horses AND zebras

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Background: HIV-associated CD8 encephalitis (CDE) is a severe inflammatory disorder characterized by infiltration of the brain by CD8+ T-lymphocytes in HIV positive patients, often when the virus is well-controlled by anti-retroviral therapy (ART). Hallmark clinical features include headache, confusion and progressive cognitive decline. Most patients who receive prompt corticosteroid therapy evolve favorably, though if left untreated, CDE can lead to coma and even death. The therapeutic impact of altering the ART regimen while giving corticosteroids remains unclear. Methods: Patient chart, functional measures, and laboratory findings were reviewed for the length of the patient's two hospitalisations for CDE in 2019 and 2021. Results: Here we present a case of an HIV positive 43-year-old male who presented with headache, confusion and memory issues both in 2019 and 2021. Imaging and lumbar puncture guided the diagnosis of CDE in 2019, while careful patient history on the patient's second hospitalisation confirmed the diagnosis of HIV encephalitis due to medication non-compliance in 2021. Conclusions: This case adds to the current state of knowledge regarding the clinical presentation of CD8 encephalitis, while highlighting both similarities and differences with other CNS pathology seen in the context of HIV.

### P.058

#### Spinal arachnoiditis as a complication of cryptococcal meningitis

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Background: Spinal arachnoiditis is a rare condition involving progressive fibrosis of the spinal arachnoid membrane and can be secondary to multiple spinal surgeries, intrathecal chemotherapy, or infection. This condition can manifest as lumbosacral radiculopathy, cauda equina syndrome, myelopathy, or syringomyelia. Methods: We present a case of a 38-year-old female with recent cryptococcal meningitis treated with amphotericin B and flucytosine, who re-presented to hospital several weeks after discharge with decreased mobility requiring a wheelchair, falls, and urinary and fecal incontinence. Results: Examination revealed lower extremity pyramidal weakness, hyperreflexia, and upgoing plantar responses. CSF analysis showed white blood cells of  $147 \times 10^6$  cells/L, protein of 4.07 g/L, and glucose of 0.4 mmol/L. Cryptococcal antigen was positive, but fungal culture was negative x 5 days, suggesting adequate initial treatment of cryptococcal meningitis. MRI spine revealed tethering of the cervical cord posteriorly at C4-5 and tethering of the midthoracic cord anteriorly. The patient was treated with IV methylprednisolone 1 g/kg daily for 5 days without significant improvement. Conclusions: Spinal arachnoiditis secondary to infection is thought to be caused by post-infectious inflammatory response syndrome (PIRIS) and is treated with IV methylprednisolone. In spinal arachnoiditis secondary to cryptococcus, the clinical findings may be confounded by the presence of hydrocephalus or myelopathy.

## OTHER MULTIDISCIPLINARY

### P.059

#### Management of motor symptoms for patients with advanced Parkinson's disease without safe oral access: a scoping review

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Background: Parkinson's disease (PD) is the second most common neurodegenerative disorder worldwide. Oral medications for control of motor symptoms are the mainstay of treatment however, as the disease progresses, patients with PD may develop dysphagia or other medical illnesses that prohibit them from safely taking oral medications. Currently there are no clinical