

Conclusions: This study will determine if DECT is superior to SECT in differentiating ICH from CE, validate the use of DECT in AIS patients who receive intervention, and potentially change the imaging paradigm for acute stroke in the future.

STROKE

P.057

A case of cerebral fat embolism in the absence of right-to-left shunt

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Background: A 64-year-old man underwent an elective right total hip arthroplasty. Post-operatively, his GCS was 6, despite reversal of anesthetic agents. His toes were upgoing bilaterally. He did not have other focal neurologic deficits. He was intubated for airway protection. His only vascular risk factor was hypertension. Methods: [Case Report]Results: A CT/CTA/CTP head was unremarkable. A 1.5T MRI showed a few tiny, bihemispheric, embolic infarcts. These were not significant enough to account for his decreased level of consciousness. His blood work did not show evidence of coagulopathy. A subsequent 3T MRI demonstrated widespread, tiny embolic infarcts in a starfield pattern, consistent with cerebral fat embolism. A transesophageal echocardiogram with bubble study failed to demonstrate a right-to-left shunt. By post-operative day 11, he returned to his neurological baseline. Conclusions: A high degree of suspicion is required to diagnose cerebral fat embolism. There are reports of cerebral fat embolism in the absence of right-to-left shunt. The proposed mechanism is physiologic stress leading to systemic release of free fatty acids and inflammatory mediators, which damage capillary beds and disrupt the blood-brain barrier. This diagnosis has important prognostic implications as fat vacuoles deform easily and deficits are typically more reversible than those occurring with other embolic events.

P.058

Reasons for withholding tissue Plasminogen Activator (tPA) administration during the COVID-19 pandemic at a tertiary stroke centre

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Background: Stroke is a leading cause of death and disability worldwide, including Canada. Treatments for stroke are time dependent and IV tPA for acute ischemic stroke decreases the chance of disability at 90 days if given within 4.5 hours of symptom onset. The onset of the Covid-19 pandemic was initially associated with a decrease in acute stroke treatment with thrombolysis across North America. These decreases seemed transient, with a rebound in numbers seen in other provinces across Canada

as widespread lockdown orders were lifted. However, a rebound in thrombolysis was not seen at Royal University Hospital (RUH) in Saskatoon, Saskatchewan during the same period. We will analyze documented reasons why thrombolysis was withheld. Methods: We conducted a retrospective chart review of adult patients with ischemic strokes presenting within 4.5 hours of symptom onset to the RUH from March 2019 –January 2021. We received a waiver of consent from the Research Ethics Board. Results: 128 patients met the inclusion criteria. Statistical analysis is currently ongoing. Conclusions: Initial results suggest that there are similar reasons for withholding tPA before and after the Covid-19 pandemic. The main reasons include rapidly resolving/resolved symptoms and a documented tPA exclusion criterion.

P.059

Cerebral small vessel disease burden as a predictor of longitudinal cognition in patients with transient ischemic attack

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Background: Cerebral small vessel disease (CSVD) is associated with stroke, cognitive decline, and dementia. In this study, we examined how SVD is longitudinally related to cognitive performance in transient ischemic attack (TIA) patients compared to controls. Methods: We rated CSVD at baseline on MRI in TIA patients (n=197) and controls (n=113) for microbleeds (CMB), lacunes, white matter hyperintensities (WMH), and perivascular spaces (EPVS). Neuropsychological testing was administered across 5 years using the following assessments: BVMT, RAVLT, TMTA, TMTB, WAIS-R. Results: Periventricular WMH ≥ 2 yielded slower performance on TMTB across all timepoints (adjusted difference 20.3 seconds, 95%CI [8.4,32.2]), as did deep WMH ≥ 2 (20.1 sec, 95%CI [7.6,32.6]). Basal ganglia EPVS >20 performed slower on TMTA (10.1 sec, 95%CI [4.7,15.5]) and TMTB (21.2 sec, 95%CI [3.4,39.1]). Centrum semiovale EPVS >20 performed slower on TMTB (27.2 sec, 95%CI [10.6,43.8]) and worse on WAIS-R at 5-years (-18.6, 95%CI [-35.0,-2.2]). Lacunes ≥ 3 performed slower on TMTA across all timepoints (4.0 sec, 95%CI [0.1,7.9]). Total CSVD ≥ 2 performed slower on TMTA (3.7 sec, 95%CI [0.4,7.0]) and TMTB (13.9 sec, 95%CI [2.9,24.9]) across 5 years. When stratifying results, associations were generally found in TIA, not controls. Conclusions: Findings demonstrate that CSVD is associated with poorer cognitive performance longitudinally, and is more pronounced in TIA compared to control.

P.060

Teamwork makes dreamwork: a stroke of genius

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Background: Interprofessional collaboration is at the center of much of our work as Neurologists, yet often Medical Education inadequately prepares students for the complexities of

interdisciplinary practice. Authentic, meaningful Interprofessional Education (IPE) requires consideration in involvement of all individuals involved in interprofessional health care (IPHC) (Holbrook, 2013). Methods: We have collected authentic stories of acute stroke care through interviews with patients and other health care professionals on the acute stroke care team. Drawing on these narratives, we have crafted a multimedia story combining film, photography, and art. Results: This case will be integrated into Western University's Undergraduate Medical Education curriculum but is intended to be a valuable tool for teaching IPE competencies in all IPE contexts. All media will be available through Western Libraries open access Health Education Media Library. Main learning outcomes include improved recognition of HCP roles and the vital and diverse contributions of each team member. Conclusions: Drawing on the experiences of real stroke patients, families, and all other HCPs, we have crafted a rich educational case portraying the complexity of IPHC that will allow learners to reflect on the complex roles of health professionals in a successful interprofessional team.

CANADIAN STROKE CONSORTIUM (CSC)

P.061

Stroke from cerebral artery dissection after cervical spine manipulation therapy in younger patient case report

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Background: Cervical and lumbar spine manipulation therapy is widely used treatment of spinal degenerative disc disease. Serious side effects can be associated with this treatment especially in cervical spine. Stroke represents an infrequent adverse reaction associated with cervical spine manipulation therapy. Methods: 34 year old lady presented to Emergency Department (ED) referring Hospital 20 minutes after having neck manipulation by a chiropractor, she complained of neck pain after the manipulation with syncope, half hour later developed visual field loss, with few episodes of emesis, and increasing headache. Results: The patient was started on Aspirin and admitted locally for observation. Computers tomography (CT) head, CT-Angiography showed left Vertebral artery (V3 segment), MRI showed acute infarction within the both cerebellar hemisphere, after 3 days patient transferred to our unit, patient had posterior fossa decompressive craniotomy with external ventricular drainage (EVD), discharged to rehabilitation 2 weeks, 2 months follow-up patient improving. Conclusions: There is increased evidence that shows increased association between spinal manipulation and adverse effects and dissection of vertebral arteries in younger population. Younger patients (< 45 years) are particularly high risk, they should be informed of the risk of stroke or vascular injury from this procedure. No aggressive manipulation in younger population.

P.062

A study of stroke-related experiences and priorities of elderly living with dementia, their family caregivers and physicians

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Background: Around 10% of ischemic stroke patients have pre-existing dementia and are excluded from stroke trials and routine care. Little is known about physician practices in the stroke care of people living with dementia (PLWD) leading to limited understanding of their experiences, priorities, and outcomes. This study aims to better understand PLWD through in-depth interviews. Methods: This study employs a qualitative descriptive methodology with two sets of 20 semi-structured interviews with PLWD and their primary caregivers (dyads), and with stroke physicians. Interviews with dyads investigate their experiences, priorities, and attitudes towards stroke care. Participants will be recruited through snowball sampling and interviews will be analyzed through qualitative data analysis software. Results: Initial analyses of the PLWD-caregiver dyad interviews have been completed, revealing themes of independence, uncertainty about the future, and fears of another stroke. Conclusions: As the population ages, stroke teams will likely encounter more PLWD. Engaging PLWD and their caregivers is crucial to better understand their experiences and priorities, which will inform future studies and improve their care. The findings from the dyad and physician interviews will be relevant to a broad audience, including patients, caregivers, physicians, researchers, and policymakers.

P.063

Physician approaches to the initial management of an intraluminal thrombus in recently symptomatic carotid artery stenosis: results from the Hot Carotid Study

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Background: The presence of intraluminal thrombi (ILT) in acutely symptomatic carotid stenosis ("hot carotid") represents a therapeutic dilemma for physicians. With little evidence to guide treatment, current ILT management approaches rely on individual or institutional preferences. Methods: This mixed methods study analyzed themes from semi-structured interviews with 22 stroke physicians from 16 centers, paired with a worldwide case-based survey of 628 stroke physicians conducted through the "Practice Current" section of Neurology: Clinical Practice. Results: In the thematic analysis of the interviews and quantitative analysis of the survey, participants favoured using anticoagulation with or without antiplatelet agents in patients with ILT (463/628, 74%). Despite a preference for anticoagulation, uncertainty regarding optimal antithrombotic management was noted in the thematic analysis. Additional