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

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