

Deferral of consent is an acceptable method in consenting patients; however, it is underutilized. We aim to share our experience with deferred consent. Methods: Participants in two prospective studies underwent a CT-Perfusion scan (intervention) at the time of first hospital imaging, in order not to impact clinical treatment. Deferred consent was then obtained. The primary outcome was the rate of deferred consent. The number of days to obtain consent, refusal rate, and waiver of consent rate was also reported. Results: A total of 291 patients (200 severe traumatic brain injury [TBI] and 91 out-of-hospital cardiac arrest) were enrolled between the two emergency CT-perfusion studies. Some (34/291[11.9%]) could not be reached; waiver of consent was granted by our ethics board. Deferred consent was obtained in 252/291(86.6%). The majority were consented by the partner/spouse (25.2%) and most consents took place within 7-days (76.0%) of enrollment. Five (1.7%) refused consent. Deferred consent rates were higher in the cardiac arrest population (97.8%) compared to the severe TBI population (83.7%). Conclusions: Deferred consent is an acceptable method of obtaining consent in emergency research when the intervention risk is low.

### P.036

#### **Delayed orthostatic tachycardia – is the time frame for postural orthostatic tachycardia syndrome arbitrary?**

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Background: Postural Orthostatic Tachycardia Syndrome (POTS) is the increase in heart rate (HR) by  $\geq 30$  bpm within 10 minutes of upright posture without orthostatic hypotension (OH). This study specifically investigated patients who develop delayed symptomatic orthostatic tachycardia (i.e. after >10 minutes) without OH. Methods: Clinical histories and laboratory tests of patients assessed for orthostatic intolerance (OI) during last 10 years were reviewed. All patients underwent autonomic tests (sweat test, heart rate variability to deep breathing/Valsalva, 45-minute head up tilt table test (TTT) and quantitative sensory testing. Results: Among 974 patients with OI, 43% (419/974) were diagnosed with POTS whereas 12.4% (121/974) had delayed orthostatic symptoms on TTT alongwith delayed orthostatic tachycardia (DOT;  $\bar{x}$  = 30.3 minutes) without OH. In this cohort, mean HR increase was 51.7 bpm (range: 40-104 bpm). Other findings were significant narrowing of pulse pressure (PP) i.e.  $\leq 25\%$  of systolic pressure ( $\bar{x}$  = 16.2%, range: 6.4% -24.3%), excessive BP oscillations and syncope (9.9%). About 1/3 (37.2%) with DOT had definite small fiber/autonomic neuropathy. Conclusions: Patients with OI may manifest delayed symptoms/DOT and maybe missed on a 10-minute TTT. The marked reduction in PP observed in these patients signifies reduced cardiac output, possibly from peripheral blood pooling due to small fiber/autonomic neuropathy.

## STROKE

### P.044

#### **The impact of working hours on rapid GFAP measurement in acute stroke: evaluation of sampling bias in an ongoing prospective study**

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Background: Glial fibrillary acidic protein (GFAP), a brain-specific biomarker, shows promise in differentiating intracerebral hemorrhage (ICH) from acute ischemic stroke (IS) and stroke mimics (SM). A novel point-of-care platform measures GFAP in minutes, yet requires centrifugation to obtain plasma. We aim to determine whether participants recruited in an ongoing prospective biomarker study (during working hours) differ from non-recruited patients. Methods: An exploratory analysis of undifferentiated stroke <24h from onset, where plasma GFAP levels (pg/ml) are measured (i-STAT Alinity) at hospital arrival. Clinical characteristics are compared among recruited and non-recruited patients. Results: Among the first 101 patients recruited, mean ( $\pm$ SD) age ( $70.8 \pm 14.5$  years), % females (48%), and median (IQR) NIHSS (9(3-20)) were similar to the 270 non-recruited patients ( $70.3 \pm 16.3$  years, 51% females, NIHSS 7 (3-17), respectively) in the same time period. Median ASPECTS was slightly lower in recruited patients (10(9-10) vs (10(10-10)) ( $p=0.03$ ). ICH and SM were more common among non-recruited (52% IS/13% ICH/32% SM) compared to recruited patients (67% IS/5% ICH/29% SM,  $p=0.002$ ), while large-vessel occlusion was more common among those recruited (44% vs 19%,  $p=0.001$ ). Conclusions: Clinical characteristics do not differ among recruited vs. non-recruited patients in an ongoing biomarker study, yet sampling bias exists regarding underlying stroke condition, with efforts to mitigate this going forward.

### P.045

#### **Prevalence of right-to-left shunting in stroke occurrence of patients with active cancer**

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Background: Presence of right-to-left shunt has been proposed as a mechanism of paradoxical embolism in patients with active cancer. Our study thus aims to investigate the role of shunting in

stroke occurrence among cancer patients. **Methods:** This is a retrospective study with our population consisting of patients presenting to the Ottawa Hospital with ischemic stroke between January 01, 2020, and December 31, 2022. Presence of right-to-left shunting is identified in patients with and without cancer diagnosis within one year of ischemic stroke. The prevalence of shunt is assessed using 95% confidence intervals (CI). **Results:** Among 654 patients, 495 (37% female, median age 53 years) were included in the study, in which 47 (9.5%) had active cancer, with 12 patients (25.5%, 95% CI 14 - 40) diagnosed with a shunt. In contrast, among 448 patients (90.5%) without active cancer, 133 patients (30%, 95% CI 25 - 34) were found to have a shunt. **Conclusions:** The prevalence of right-to-left shunting tends to be lower in patients with ischemic stroke and active cancer diagnosis. Our results are similar to a recent study indicating a higher rate of shunt among patients without cancer. Our finding does not support the hypothesis that cancer-associated stroke is related to right-to-left shunting.

## P.046

### Impact of telemedicine evaluation among ischemic stroke patients transferred for endovascular thrombectomy: data from the OPTIMISE registry

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**Background:** Telemedicine evaluation for treatment of acute stroke patients with IV thrombolysis has been shown to be beneficial. Its usefulness for the evaluation of patients transferred from a primary stroke centre (PSC) to a comprehensive stroke centre (CSC) for endovascular thrombectomy (EVT) is less well defined. **Methods:** We retrospectively analyzed the Canadian OPTIMISE registry which included data from 20 comprehensive stroke centers across Canada between January 1, 2018, and December 31, 2022 to compare treatment metrics and early outcomes between two groups: patients evaluated by telemedicine (TM) and patients evaluated in person (non-TM) at the PSC prior to CSC transfer. **Results:** We included 3317 patients who were transferred from a PSC to a CSC for: 888 TM and 2429 non-TM. There were no major differences in baseline characteristics, including intravenous thrombolysis administration, though the TM group included more men. TM patients had longer onset-to-puncture times (441 vs 403 minutes,  $p < 0.001$ ) and higher symptomatic intracerebral hemorrhage (sICH) rates (7.4% vs 3.7%,  $p < 0.001$ ), but CSC door-to-puncture times and successful recanalization rates did not differ. **Conclusions:** Patients transferred to a CSC for EVT first evaluated by TM had similar characteristics to those evaluated in person at the PSC, but longer onset-to-puncture times and higher sICH rates.

## P.047

### Optimizing workflow of the initial patient visit to the stroke prevention clinic

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**Background:** Referrals to the Stroke prevention clinic with incomplete preliminary investigations decrease clinic capacity due to additional workload and the need for follow-ups. We aimed to improve the efficacy of the initial visit by increasing the completion rate of vascular imaging. **Methods:** Pre-post quasi-experimental study with three phases: Phase 1: Surveillance; Phase 2: Stakeholder feedback-informed intervention development (physicians and clinic staff); and Phase 3: Implementation. Interventions included a new referral order within the provincial EMR; a specific physician triage form listing required investigations (brain imaging, vascular imaging, cardiac tracing); and a nurse-led pre-visit via telephone. The primary outcome measure was the completion of vascular imaging - assessed with multi-variable logistic regression **Results:** The study's inclusion criteria were met by 383 patients, mean age of  $67.6 \pm 13.2$  years; 49% were female, 62.5% were diagnosed with vascular events. An increase in vascular imaging before the initial visit was found in Phase 3 (139/184, 75.5%) compared to Phase 1 (121/198, 61.1%, Odds ratio 1.96 95% CI 1.3-3.1;  $p = 0.003$ ). Fewer follow-up visits were required in Phase 3 (22.8%) compared to Phase 1 (31.8%,  $p = 0.049$ ). **Conclusions:** A uniform referral process, a standard triage process, and a nurse-led pre-visit may improve the completion of essential investigations before the patient visit.

## P.048

### Cost-effectiveness of tenecteplase compared to alteplase for acute ischemic stroke from a Canadian perspective

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**Background:** Tenecteplase is a genetically-modified variant of the tissue plasminogen activator alteplase, with increased fibrin-specificity, administered as a more convenient intravenous bolus. Recent data, from the AcT trial, have shown tenecteplase to be non-inferior to alteplase in patients with acute ischemic stroke (AIS) treated within 4.5 hours from symptom onset, the direction of effect favoring tenecteplase. As a result, the Heart and Stroke Foundation of Canada has added tenecteplase to the Stroke Best Practice Recommendations. However, its cost-effectiveness in the Canadian setting remains unknown. **Methods:** An analysis was performed to estimate the cost-effectiveness of tenecteplase