

**P.066****Hemispheric Reorganization of Functional Language Networks Following Neonatal Stroke Supports Language Outcome**

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**Background:** Neonatal Arterial Ischemic Stroke (NAIS) is a common form of paediatric stroke often affecting classical language areas. The post-stroke reorganization of functional language networks may provide insight into later-emerging language deficits and may help to identify at-risk children with NAIS. **Methods:** A cross-sectional study of fourteen children with left (n=8; 2M; 11.1±2.2 years) or right (n=6; 3M; 12.4±4 years) middle cerebral artery (MCA) NAIS, as well as seven neurotypical children (5M; 13.4±2.7 years), was conducted. Children listened to correct/incorrect syntactic sentences while MEG was recorded, and task-related functional connectivity in the time window and frequency band of interest was determined. Language outcomes were assessed using a battery of neuropsychological tests. **Results:** A network-based analysis of syntactic language processing (4-7 Hz, 1.2-1.4s) revealed a dysfunctional bilateral frontal-temporal network involving language areas in patients ( $p=0.01$ ). Patients with right-MCA stroke exhibited a positive correlation between left hemispheric connectivity and measures of language skill ( $p<0.01$ ), resembling the neurotypical children. In left-MCA stroke patients, greater bilateral connectivity or right laterality in the language network is correlated with good outcome ( $p<0.05$ ). **Conclusions:** Depending on the hemispheric location of stroke, certain patterns of language network reorganization may account for impairments in a bilateral frontal-temporal language subnetwork and support language outcome.

**P.067****A worldwide survey of physician approaches to patients with acutely symptomatic carotid stenosis (“hot carotid”)**

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**Background:** Patients with acutely symptomatic carotid stenosis (“hot carotid”) have high up-front risk of recurrent strokes. Uncertainties remain regarding optimal anti-thrombotic management, particularly while awaiting revascularization with endarterectomy or stenting (CEA/CAS). **Methods:** We administered a worldwide electronic survey through *Neurology: Clinical Practice*. Respondents chose their preferred antithrombotic regimen (1) in a general case of acutely symptomatic carotid stenosis, (2) if the patient was already on aspirin, or (3) had associated intraluminal thrombus (ILT). Responses among different groups were compared using multivariable logistic regression. **Results:** We received 668 responses from 71 countries. Most respondents favoured CEA (69.1%) over CAS, an aspirin-containing

regimen (88.5%), and a clopidogrel-containing regimen (64.4%) if already on aspirin. Monotherapy was favoured by 54.4-70.6% across scenarios. The preferred dual therapy was low-dose aspirin (75-100mg) plus clopidogrel (22.2%), or high-dose aspirin (160-325mg) plus clopidogrel if already on aspirin (12.2%). Respondents favouring CAS more often chose  $\geq 2$  agents (adjusted odds-ratio [aOR] vs CEA: 2.00, 95% CI 1.36-2.95,  $p=0.001$ ) or clopidogrel-containing regimens (aOR: 1.77, 1.16-2.70,  $p=0.008$ ). Respondents from Europe less commonly chose multiple agents (aOR vs United States/Canada: 0.57, 0.35-0.93,  $p=0.023$ ) while those from Asia more often favored multi-agent regimens (aOR: 1.95, 1.11-3.43,  $p=0.020$ ). **Conclusions:** Our results highlight the heterogeneous anti-thrombotic management of hot carotids. Future trials should likely include high-dose aspirin monotherapy or low-dose aspirin/clopidogrel dual-therapy as a comparator arm to stimulate enrolment.

**P.068****Discrepancy between post-treatment infarct volume and 90-day outcome in ischemic stroke: A validation study in the ESCAPE-NA1 randomized controlled trial**

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**Background:** Some patients do poorly despite small infarcts after endovascular therapy (EVT) whilst others with large infarcts do well. We validated exploratory findings from the ESCAPE trial regarding factors associated with such discrepancies, in the ESCAPE-NA1 trial (NCT02930018). **Methods:** We identified “discrepant cases” with modified Rankin Scale (mRS)  $\geq 3$  despite small follow-up infarct volume (FIV  $\leq 25$ th-percentile) on 24-hour CT/MRI or mRS  $\leq 2$  despite large FIV (volume  $\geq 75$ th-percentile). We compared area-under-the-curve (AUC) of pre-specified logistic models containing (a) pre-treatment factors (age/cancer/vascular risk-factors) and (b) treatment-related/post-treatment factors (serious adverse events/SAEs) in identifying small-FIV/mRS  $\geq 3$  and large-FIV/mRS  $\leq 2$ , with stepwise regression-derived models. **Results:** Among 1,091 patients, 42/287 (14.6%) with FIV  $\leq 7$  mL (25th-percentile) had mRS  $\geq 3$ ; 65/275 (23.6%) with FIV  $\geq 92$  mL (75th-percentile) had mRS  $\leq 2$ . Pre-specified pre-treatment factors (age/cancer/vascular risk-factors) were associated with FIV  $\leq 7$  mL/mRS  $\geq 3$ ; stepwise models selected similar variables (similar AUCs: 0.92-0.93,  $p=0.42$ ). SAEs (infarct-in-new-territory/recurrent stroke/pneumonia/heart failure) were strongly associated with FIV  $\leq 7$  mL/mRS  $\geq 3$ ; stepwise models also identified onset-to-needle time and hemoglobin (24-hours) as treatment-related/post-treatment factors (similar AUCs: 0.92-0.94,  $p=0.14$ ). Younger age was associated with FIV  $\geq 92$  mL/mRS  $\leq 2$ ; stepwise models also selected diabetes absence and baseline hemoglobin (similar AUCs: 0.76-0.77,  $p=0.82$ ). Absence of SAEs (stroke progression/pneumonia/intracerebral hemorrhage) was strongly associated with FIV  $\geq 92$  mL/mRS  $\leq 2$ ; stepwise

models also identified 24-hour hemoglobin, glucose, and BP (similar AUCs: 0.79-0.80,  $p=0.030$ ). **Conclusions:** FIV-mRS discrepancies are associated with pre-treatment factors like age/comorbidities; and post-treatment complications related to stroke evolution, secondary prevention, and post-acute care quality. Optimizing thrombolysis speed, BP, glucose, and hemoglobin are modifiable factors meriting further study.

## P.070

### Introducing Stroke Endovascular Thrombectomy Into A Smaller Canadian Site, Is It Safe?

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**Background:** Success of Endovascular Thrombectomy (EVT) requires ultra-fast access to specialized neuro imaging, neurological assessment and an angio suite with interventional radiologists. Prior access was via transport to Vancouver and outcomes were poor, with a high rate of disability or death. This appeared primarily due to long delays. **Methods:** Quality control process, in parallel to the introduction of a new intervention, EVT, to Vancouver Island, to determine if this intervention could be delivered with reasonable safety and good outcomes. Patients receiving EVT from May, 2016 until Sep, 2019 are included, with 90-day outcomes. Data was collected by stroke nurses. **Results:** The proportion of patients having a good outcome was comparable to that of the major clinical trial involving Canadian academic centres. The proportion sustaining a poor outcome was comparable to the control group in that trial population (who still received tPA treatment where possible). This was despite a median age 4.5 years greater than in that trial. **Conclusions:** EVT required coordination of multiple services. Victoria General Hospital performance in terms of speed to treatment was slower than in the published trials. This is a factor in determining outcome and is therefore an important quality improvement target moving forward.

## P.071

### Focused cardiac ultrasound in stroke: a feasibility study

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**Background:** Canadian Stroke Best Practice Recommendations recommend both cardiac monitoring and transthoracic echocardiography (TTE) to assess for cardioembolic sources of stroke. TTE has a diagnostic yield which is historically low at 5-10%. The goal of this project was to evaluate the practicality of a bedside, focused approach to TTE in ischemic stroke. **Methods:** This is a cross-sectional study evaluating patients undergoing echocardiography for evidence of possible cardioembolic stroke. It compared the standard and focused TTE imaging approaches. Of the 61 patients reported, data is currently available for 15 participants. Independent samples t-test were performed to compare measurements. **Results:** Mean time to finish image acquisition for the focused TTE was significantly shorter than the

complete TTE (12 min or less vs 30 min or more) ( $p<0.0001$ ). No cardiac sources of stroke were found by either mechanism in this cohort, representing 100% agreement between the two modalities. **Conclusions:** Focused echocardiography studies are quicker to execute and employ more affordable, portable, digital TTE devices. The test is done at bedside, reducing the need for patient transport. Image acquisition takes approximately half the time to obtain. This potentially allows for more rapid clinical decision making and can facilitate discharge from the hospital.

## P.072

### Ticagrelor vs Clopidogrel in Addition to Aspirin in Minor Ischemic Stroke/ TIA – a Systematic Review & Network Meta-Analysis (NMA)

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**Background:** Dual antiplatelet therapy (DAPT) is recommended after minor ischemic stroke/ transient ischemic attack (TIA), but Clopidogrel/ Aspirin has never been compared directly to Ticagrelor/ Aspirin. Our objective is to compare these regimens in terms of efficacy and safety. **Methods:** Medline, Embase, and Cochrane were searched for randomized controlled trials (RCTs) that enrolled adults with minor stroke/ TIA and administered antiplatelets within 72 hours. The primary efficacy outcome is recurrent stroke or death at 90 days. We performed a Bayesian-approach NMA. Between group comparisons were presented as odds-ratios (OR) with 95% credible intervals (95%CI). Sucraplots were based on calculated probabilities of rankings for individual outcomes. **Results:** 9/4014 studies were included: 5 RCTs and 4 subgroup analyses. 22,098 patients were analyzed. At 90 days, both DAPT regimens were superior to Aspirin in the prevention of recurrent stroke/ death. There was no significant difference between Clopidogrel/ ASA compared to Ticagrelor/ ASA (OR 0.90 [95%CI 0.74 – 1.09]), although Clopidogrel/ Aspirin was ranked #1 using Sucraplots. There was no significant difference between the interventions for mortality, bleeding, or adverse events. **Conclusions:** DAPT was superior to ASA in the prevention of recurrent strokes/ death, but there was no difference between Clopidogrel/ ASA and Ticagrelor/ ASA.

## P.073

### The Effect of Cancer on The Prevalence Of Stroke Survivorship In Canada – A Cross-Sectional Study

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**Background:** In Canada, it's unknown if the prevalence of stroke survivorship differs in the population with active cancer compared to those without cancer. **Methods:** We analyzed the 2015-2016 iteration of the Canadian Community Health Survey. The prevalence of stroke survivorship was compared across risk