

**P.196****Antiplatelet, anticoagulant, or endovascular treatment for stroke prevention in blunt cerebrovascular injury: Retrospective review, systematic review and meta-analysis**

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doi: 10.1017/cjn.2021.472

**Background:** Ischemic stroke occurs following trauma-related blunt cerebrovascular injury (BCVI) in up to 20% of cases. Preventative treatment includes antiplatelets, anticoagulants, and/or endovascular treatment (ET), but the optimal choice remains unclear. The objective of this study was to compare the ischemic stroke rate between these three treatments. **Methods:** Following PRISMA guidelines, we queried the OVID Medline, Embase, Web of Science, and Cochrane Library databases from September 2019 to inception to identify studies reporting treatment-stratified outcomes in BCVI patients. Meta-analysis was performed to compare outcomes between the treatment groups, using odds ratios. Retrospective review of our institutional experience with BCVI outcomes was performed and added to the meta-analysis. **Results:** Analysis of seven comparative studies of antiplatelets (n=334) versus anticoagulation (n=325) found no significant difference in ischemic stroke rate (OR 1.27, 95%CI 0.40-3.99), but a decrease in hemorrhagic complications (OR 0.38, 95%CI 0.15-1.00). Analysis of seven comparative studies of antiplatelets/anticoagulants (n=805) versus ET (n=235) also found no significant difference in stroke rate (OR 0.71, 95%CI 0.35-1.42). **Conclusions:** Antiplatelets and anticoagulants were similarly effective in reducing ischemic stroke risk in BCVI, but antiplatelets were better tolerated in this trauma population. The addition of endovascular treatment did not further reduce stroke risk compared to antiplatelets or anticoagulants alone.

**P.199****Variability descriptors of cerebral blood flow velocity as predictors of vasospasm in Subarachnoid Hemorrhage: A feasibility study**

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doi: 10.1017/cjn.2021.475

**Background:** Transcranial Doppler (TCD) measurements poorly predict vasospasm in patients with aneurysmal subarachnoid hemorrhage (aSAH). Variability descriptors of mean cerebral blood flow velocity (mean-CBFV) may improve this prediction. We assessed the feasibility of generating reliable mean-CBFV variability metrics using extended TCD recordings in aSAH patients and healthy controls. We also explored whether

these parameters are capable to discriminate aSAH patients from healthy controls, and between patients with and without vasospasm. **Methods:** Bilateral mean-CBFV, systemic blood pressure and heart rate were recorded for 40 minutes in 3 groups: aSAH patients (n=8) within the first 5 days post-ictus, age-matched healthy controls (n=8) and young healthy controls (n=8). We obtained linear [standard deviations, coefficient of variations, very-low, low and high-frequency power-spectra] and non-linear [Fractality, deterministic Chaos analyses] variability metrics. **Results:** All TCD recordings provided consistent variability metrics. aSAH patients showed higher correlation dimensions, increased high-frequency spectral power, and decreased very-low frequency power than healthy controls. aSAH patients who developed vasospasm (n=3) showed higher mean-CBFV and lower coefficient of variations than those without vasospasm (n=5). **Conclusions:** Descriptors of mean-CBFV variability may distinguish between aSAH patients with and without vasospasm. Future studies are required to evaluate the role of these variability parameters for risk stratification in aSAH.

**OTHER NEUROSURGERY****P.201****Disruption of the Frontal Aslant Tract is Associated with Transient Aphasia and not Agraphia: A Neurosurgical Case Report**

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doi: 10.1017/cjn.2021.477

**Background:** The frontal aslant tract (FAT) is a recently discovered white-matter tract connecting the medial superior frontal gyrus to the inferior frontal gyrus. There is increasing evidence for its importance in speech initiation and production. Despite this, there remains limited evidence demonstrating clinical outcomes when lesioning this tract. **Methods:** Medical records for the case were reviewed. Imaging was exported and tractography was performed using 3D Slicer. **Results:** A 58-year-old female presented with a focal seizure and imaging demonstrating a left frontal extra-axial lesion. She underwent a left frontal craniotomy for tumour debulking and biopsy. The final pathology was consistent with a diffuse large B-cell lymphoma. Postoperatively, she presented with expressive aphasia without agraphia. She was able to write out answers to questions she could not verbalize. We used tractography to provide evidence of postoperative disruption to her left FAT. At a 6-week clinical follow-up, her language deficits were clinically resolved. **Conclusions:** To our knowledge, this is the first reported case of aphasia without agraphia seen with disruption of the left FAT. Further elucidating clinical outcomes of disrupting the dominant FAT will aid in improved patient counselling, prognostication and neurosurgical planning. Further research is required to investigate the mechanisms underlying language recovery and handwriting.