

Ontario visible minorities: Chinese and South Asian Canadians
Methods: From January 1, 2020 to September 30, 2020, using the last name algorithm, rates and types of cardiac and neurological complication of these two cohorts along with the general population in Ontario with COVID-19 were analysed by Institute of Clinical Evaluative Sciences. **Results:** Preliminary results show that Chinese-Canadians (N= 1,186) with COVID-19 are older with a mean age of 50.74 years old compared to general population (N= 42,547) of 47.57 years old ($P < .001$), while South Asians (N= 3,459) have a younger mean age of 42.08 years old ($P < .001$). Total cardiac and neurological complication rates, hospitalization rates and ICU admission rates are all higher for Chinese-Canadians while they are lower in South Asians and all achieving statistical significance ($P < .001$). Overall mortality rate is significantly higher for Chinese-Canadians at 8.1% vs 5.0% general population ($P < .001$). **Conclusions:** Chinese-Canadians with COVID-19 in Ontario were much older and have higher cardiac and neurological complication rates and overall mortality rate than the general population. These data have significant implications for proper prevention and appropriate management for these vulnerable elderly Chinese-Canadians.

P.082

The Toronto Concussion Study: The Feasibility and Effects of Early Prescribed Aerobic Exercise on Recovery and Post-Concussive Symptoms in Adults – A Pilot Study

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Background: Evidence suggests that aerobic exercise (AE) soon after concussion may facilitate earlier recovery in athletes. The purpose of this pilot study was to investigate the feasibility and effects of early sub-symptom threshold AE on symptom trajectory and recovery time in a heterogeneous adult population. **Methods:** Adults presenting within 7 days of concussion were randomized to either the experimental group: prescribed AE (90% of symptom-limited heart rate achieved on Buffalo Concussion Treadmill Test [BCTT]), 30 minutes/day, 5 days/week, or the control group: standard of care exercise recommendations. Participants were assigned a heart rate monitor bracelet to track activity. They underwent serial treadmill testing to monitor exercise tolerance, update prescriptions and determine recovery. **Results:** 20 participants (10 per arm) completed the BCTT protocol within 7 days of injury, with 8/20 demonstrating exercise tolerance at week 1. 66% (4/6) of those in the experimental group were recovered by week 4, compared to only 43% (3/7) in the control group. Average heart rate monitor compliance was 32% of the prescribed time among all participants, and self-reported exercise prescription compliance was 43% in the experimental group. **Conclusions:** Early post-concussion aerobic exercise in the general adult population is a promising intervention; this study will inform the design of a larger trial.

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Early and 30-day clinical and neuropsychological effects of iatrogenic brain infarcts in the ENACT randomized-controlled trial

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Background: Small brain infarcts are often seen on diffusion-weighted MRI (DWI) following surgical/endovascular procedures. Little is known about their clinical effects. We examined the association of iatrogenic infarcts with outcomes in the ENACT (Evaluating Neuroprotection in Aneurysm Coiling Therapy) trial of nerinetide in endovascular aneurysm repair. **Methods:** In this post-hoc analysis, we used multi-variable models to evaluate the association of presence/number of DWI iatrogenic infarcts with NIHSS (National Institutes of Health Stroke Scale), mRS (modified Rankin Scale), and cognitive/neuropsychological scores (30-minute battery) at 1-4 and 30-days post-procedure. We also related infarct number to a Z-score-derived composite outcome score (quantile regression). **Results:** Among 185 patients (median age: 56, IQR: 50-64), 124 (67.0%) had iatrogenic infarcts (median: 4, IQR: 2-10.5). Nerinetide resulted in fewer infarcts. Patients with infarcts had lower Mini-Mental State Exam (MMSE) scores at 2-4 days (median: 28 vs 29, adjusted-coefficient [acoef] per additional infarct: -1.11, 95% CI: -1.88 to -0.34, $p=0.005$). Infarct number was associated with worse day-1 NIHSS (aOR for $\text{NIHSS} \geq 1$: 1.07, 1.02-1.12, $p=0.009$), day 2-4 mRS (adjusted common odds-ratio [aOR]: 1.05, 1.01-1.09, $p=0.005$) and MMSE (acoef: -0.07, -0.13 to -0.003, $p=0.040$), 30-day mRS (aOR: 1.04, 1.01-1.07, $p=0.016$) and Hopkins Verbal Learning Test scores (acoef: -0.21, -0.39 to -0.03, $p=0.020$), as well as worse composite scores at 1-4 and 30-days (acoef: -0.09, -0.15 to -0.03, $p=0.006$). **Conclusions:** Iatrogenic infarcts were associated with subtle differences in post-procedural (1-4 days) and 30-day outcomes in this middle-aged cohort. Future studies should use batteries of similar/greater granularity to validate optimal measures for short- versus long-term manifestations.

P.084

Pilot Program to Determine Impact of an Orthoptic Clinic on Patient Perceived Quality of Life of Stroke Patients

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Background: Visual impairment exists for an estimated 70% of individuals who have experienced a stroke. Identification and remediation of visual impairments can improve overall function and perceived quality of life. Our project aims to improve visual assessment and timely intervention for patients with post-stroke

visual impairment (PSVI). **Methods:** We conducted a quality improvement initiative to create a standardized screening and referral process for patients with PSVI to access an orthoptist. Post-stroke visual impairment was assessed by way of the Visual Screen Assessment (VISA) tool, administered by an occupational therapist. Patients filled out a VFQ-25 questionnaire before and after orthoptic assessment and intervention. The VFQ-25 is a validated post-stroke survey assessing a patient's perceived quality of life. Differences between pre- and post-orthoptic assessment scores will be evaluated. **Results:** Data collection currently ongoing. The benefits of a standardized screen for PSVI, standardized referral to, and experience with an orthoptist assessment will be determined. Learnings gained will also inform how we can expand the program to benefit a wider demographic of patients. **Conclusions:** The data gathered and the subsequent analysis will be instrumental in guiding ongoing improvement initiatives for patients with PSVI.

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Successful response to rituximab in a patient with A β related angiitis

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Background: A β -related angiitis (A β RA) is a rare presentation of cerebral amyloid angiopathy, where vasculitis results from an auto-immune reaction to amyloid deposits in leptomeningeal and cortical vessel walls. Anti-CD20 monoclonal antibodies, such as rituximab, have demonstrated efficacy in systemic small vessel vasculitides, particularly in refractory cases. The efficacy of rituximab in A β RA remains unknown. **Methods:** Patient chart, functional measures, and laboratory findings were reviewed from the time of patient admission until 12 months after discharge. **Results:** A 61-year-old man presented with headache and altered mental status. Brain MRI revealed multiple cortical infarcts, leptomeningeal enhancement, and cortical microbleeds, and brain biopsy ultimately confirmed the diagnosis of A β RA. The patient developed new ischemic lesions despite corticosteroid pulse, and intravenous cyclophosphamide was halted after four weeks due to iatrogenic acute hepatitis. Rituximab was initiated and led to sustained clinical improvement with no subsequent relapses. Maintenance therapy involved gradually tapered low-dose oral steroids and rituximab at 6- and 12-months post-induction. **Conclusions:** This report suggests that rituximab may be effective in inducing remission and preventing relapses in biopsy-proven case of A β RA. Controlled studies are needed to better assess the efficacy and tolerability of anti-CD20 antibodies in cerebral vasculitis.

P.088

Dysautonomia and Diabetes: A Prodrome to Fatal Familial Insomnia (FFI)

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Background: Fatal Familial Insomnia (FFI) is an autosomal dominant multisystem prion disease, with sleep disorders often being the first presentation. Although autonomic dysfunctions are key features, the frequency and timing vary between reports, and may accompany early insomnia. Moreover, endocrine changes are reported, but diabetes rarely is - with unclear timing of onset in relation to the insomnia. **Methods:** N/A **Results:** Here we present a 46-year-old previously healthy male, who within 22 months prior to the onset of sleep disturbances, developed hypertension and diabetes. Then within 3-4 months after onset of sleep disturbances development tachycardia and diaphoresis. His sleep continued to deteriorate, and later developed bulbar impairment, ataxia, diplopia, sleep apnea and cognitive decline. He passed away 20 months from onset of insomnia. Polysomnography showed status dissociates and central apnea. He had positive genetic testing, PRNP c.532G>A (p.Asp178Asn) and PRNP c.385A>G (p.Met129Val), a pathological confirmation, and a positive family history **Conclusions:** Here diabetes and hypertension significantly preceded sleep disturbances, and tachycardia and diaphoresis developed shortly after. This illustrates that dysautonomia and endocrine dysfunction may be unrecognized prodromes in some cases of FFI, and could be an early marker of clinical disease onset and therapeutic interventions, especially in genetically confirmed asymptomatic patients.

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A report of a patient presenting with orbital apex syndrome secondary to NK cell lymphoma (nasal type)

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Background: Orbital apex syndrome (OAS) can be caused by a broad range of disorders. There are several challenges present in the evaluation of these patients and in reaching a final diagnosis. We report the case of a 69-year-old male who presented with OAS that was determined to be secondary to a rare malignancy (NK cell lymphoma, nasal type). **Methods:** We analyze the