

characteristics, analgesic use, and patient-reported outcomes were collected at baseline and 12-month follow-up. The primary outcome was the composite of reduced average pain intensity and pain interference. Secondary outcomes included assessments of function, mood, and quality-of-life. **Results:** At 12-month follow-up, 13.5% (95% CI, 5.6-25.8) of patients achieved $\geq 30\%$ reduction in pain, whereas 38.5% (95% CI, 25.3-53.0) achieved a ≥ 1 point reduction in pain interference; 9.6% (95% CI, 3.2-21.0) of patients achieving both these measures. Patients with peripheral neuropathic pain were more likely to achieve this primary outcome at 12-months (25.3% of patients; 95% CI, 21.4-29.5) ($p=.012$). **Conclusions:** Patients with central neuropathic pain were less likely to achieve a meaningful improvement in pain and function compared to patients with peripheral neuropathic pain at 12-month follow-up.

A.03

Durable clinical and MRI efficacy of alemtuzumab over 6 years in CARE-MS II patients with RRMS who relapsed between Courses 1 and 2

MS Freedman (Ottawa) S Broadley (Gold Coast) A Chinae (San Juan) G Izquierdo (Seville) J Lycke (Gothenburg) BA Singer (St Louis) B Steingo (Fort Lauderdale) H Wiendl (Münster) S Wray (Knoxville) M Melanson (Cambridge) K Thangavelu (Cambridge) A Boster (Columbus) on behalf of the CARE-MS II and CAMMS03409 Investigators*

doi: 10.1017/cjn.2018.84

Background: In RRMS patients with inadequate response to prior therapy, 2 alemtuzumab courses (12 mg/day; baseline: 5 days; 12 months later: 3 days) significantly improved outcomes over 2 years (y) versus SC IFNB-1a (CARE-MS II [NCT00548405]), with durable efficacy over a 4-y extension (NCT00930553). We present 6-y efficacy (2-y core study plus 4-y extension) in patients with relapse (relapsers) between Courses (C) 1 and 2. **Methods:** Annualized relapse rate (ARR); 6-month confirmed disability worsening (CDW); MRI disease activity (Gd-enhancing lesions; new/enlarging T2 hyperintense lesions); brain volume loss (BVL; derived by relative change in brain parenchymal fraction). **Results:** 105/435 (24%) patients relapsed between C1 and C2; 33% (relapsers) versus 55% without relapse (non-relapsers) received neither alemtuzumab retreatment nor another disease-modifying therapy through Y6. ARR (Y1: 1.2) declined post-C2 (0.5), remaining low through Y6 (0.2 [0.1, non-relapsers]; 10/105 [10%] relapsed). Through Y6, patients remained CDW-free (60% [relapsers]; 75% [non-relapsers]), Gd-enhancing lesion-free (94% [relapsers]; 90% [non-relapsers]), new/enlarging T2 hyperintense lesion-free (68% [relapsers]; 69% [non-relapsers]), and MRI disease activity-free (68% [relapsers]; 69% [non-relapsers]). Alemtuzumab slowed median percent yearly BVL (Y6: -0.13% [relapsers]; -0.10% [non-relapsers]). **Conclusions:** Patients relapsing between C1 and C2 improved post-C2 through Y6. These findings support administering 2 alemtuzumab courses to achieve optimal and durable benefit.

A.04

High times? Prevalence and perceptions of marijuana use among patients with epilepsy

*G Moores (Oakville) A Lockey (Calgary) A Attar (Hamilton)**

doi: 10.1017/cjn.2018.121

Background: Despite medical advances, almost a third of people with epilepsy have medically refractory epilepsy (MRE). With failure of pharmaceutical options, patients are turning to alternative treatment options. Marijuana use in epilepsy has received extensive attention. Two recent studies evaluated the opinions of marijuana use in individuals with epilepsy, but had discrepant marijuana use rates. **Methods:** The first 200 adult patients with a known diagnosis of epilepsy seen at Hamilton General Hospital after June 1, 2017 were invited to participate. Standardized paper questionnaires gathered information about demographics, epilepsy history, and marijuana use. **Results:** One hundred forty participants returned questionnaires; 29.5% were active marijuana users; 24.5% had consumed marijuana in the past. Increased seizure frequency was significantly associated with marijuana use. There was a non-significant trend towards increased marijuana use with males and MRE. Almost half the active marijuana users noted improvement in seizure frequency. No participants experienced worsening of epilepsy with marijuana use. Side effects were common (30%), most frequent being mood. **Conclusions:** Prevalence of marijuana use among people with epilepsy is higher in our study population compared to an Australian cohort, but similar to Canadian studies. Marijuana use was significantly associated with increased seizure frequency. The majority of patients perceived benefit with regard to seizure control.

A.05

Association between timing of direct enteral tube placement and outcomes after acute stroke

RA Joundi (Toronto) G Saposnik (Toronto) R Martino (Toronto) J Fang (Toronto) MK Kapral (Toronto)*

doi: 10.1017/cjn.2018.86

Background: The relationship between timing of direct enteral feeding tube (DET; gastrostomy/jejunostomy) placement and outcomes after stroke is unknown. **Methods:** We used the Ontario Stroke Registry and linked administrative databases to identify patients with acute stroke between 2003-2013 who received DET during hospital admission. We used multiple logistic regression and Cox proportional hazard models to determine the association between time from admission to DET placement and outcomes of severe disability at discharge (modified Rankin Scale score 4-5) and 30-day mortality after DET placement, adjusting for age, sex, co-morbidities, stroke type, stroke severity, intensive care or stroke unit admission, palliation, and hospital type. **Results:** 1,342 patients met our inclusion criteria. There was a lower hazard of 30-day mortality for each week in delay to DET placement (adjusted HR 0.89, 95% CI 0.80 to 0.99), but higher odds of severe disability (adjusted OR 1.36, 95% CI 1.14 to 1.62). Patients with DET placement within 1 week had the highest 30-day mortality compared to subsequent weeks (adjusted HR 1.59, 95% CI 1.05 to 2.4). **Conclusions:** Delayed DET placement after stroke is associated with lower 30-day mortality but greater disability. Thirty-day mortality was highest in those who received DET

within 1 week of admission. These associations may inform decisions regarding timing of DET placement after stroke.

A.06

Trends in hospital admission and in-hospital mortality for atrial fibrillation related stroke in Canada

GA Jewett (Calgary)* P Lindsay (Toronto) J McQuiggan (Toronto) B Zagorski (Toronto) N Kamal (Calgary) MK Kapral (Ontario) AM Demchuk (Calgary) MD Hill (Calgary) AY Yu (Toronto)

doi: 10.1017/cjn.2018.87

Background: Atrial fibrillation (AF) is associated with increased risk of ischemic stroke. In Canada, the contemporary burden of AF-related stroke is incompletely characterized. Our objective was to determine temporal trends in hospital admissions and in-hospital mortality for AF-related stroke in Canada from 2007 to 2015. **Methods:** We conducted a retrospective cohort study using Canadian national administrative data to identify admissions to hospital for stroke with comorbid AF between 2007 and 2015. We analyzed temporal trends in age- and sex-standardized proportion of admissions with comorbid AF and associated in-hospital mortality. **Results:** There were 222,100 admissions to hospital for ischemic (182,990) or hemorrhagic (39,110) stroke. The age-sex adjusted proportion of ischemic stroke admissions with comorbid AF increased from 16.2% to 20.5% (p for trend = 0.02) between 2007 and 2015, and was stable among hemorrhagic stroke. In-hospital mortality for ischemic stroke with comorbid AF decreased from 21.6% to 15.0% (p for trend = 0.001). **Conclusions:** Rates of hospital admission for ischemic stroke with comorbid AF have increased, while associated in-hospital mortality has decreased. These results identify AF as an important continued focus for stroke prevention. Our findings provide insight into current trends and highlight the need for continued focus on AF-related stroke.

A.07

Characterizing the epidemiology of epilepsy in Saskatchewan, Canada

L Hernandez Ronquillo (Saskatoon)* L Thorpe (Saskatoon) P Pahwa (Saskatoon) J Tellez Zenteno (Saskatoon)

doi: 10.1017/cjn.2018.88

Background: There is no available estimate of the incidence and mortality of epilepsy in all age groups in the Canadian population. This study aimed to measure the incidence, prevalence, mortality and the secular trends for epilepsy in Saskatchewan between 2005 and 2010. **Methods:** A population-based cohort study was established from Saskatchewan's provincial health administrative data. The population was followed until termination of coverage, death, or 31 December 2010. Individuals with epilepsy were identified based on ICD codes algorithms from 2005 to 2010. **Results:** The age-standardized incidence of epilepsy was 62 per 100,000 person-year. The age-standardized incidence rate of epilepsy in self-declared Registered Indians was 122 per 100,000 person-year. There was a significant decrease in the incidence of epilepsy for all groups over the study period. The age-standardized prevalence of epilepsy was 9 per 1,000 people. There was a significant increase in the prevalence of epilepsy over this time period. The adjusted mortality rate was 0.023 per 1000 person-year, and the all-cause Standardized Mortality Ratio for epilepsy was 2.45. The SMR

remained constant over the six-year period of the study. **Conclusions:** This study is the first in Canada to measure the incidence and all-cause mortality of epilepsy in all age groups.

CSCN / CACN CHAIR'S SELECT ABSTRACTS

B.01

Neonatal Neuro-Critical Care (NNCC) program associated with improved short term outcomes in neonates significant Hypoxic Ischemic Encephalopathy (HIE)

S Roychoudhury (Calgary) M Esser (Calgary) J Buchhalter (Calgary) L Bello-Espinosa (Calgary) H Zein (Calgary) A Howlett (Calgary) S Thomas (Calgary) P Murthy (Calgary) J Appendino (Calgary) C Metcalfe (Calgary) J Lind (Calgary) N Oliver (Calgary) S Kozlik (Calgary) K Mohammad (Calgary)*

doi: 10.1017/cjn.2018.89

Background: Despite advances in neonatal care, neonates with moderate to severe HIE are at high risk of mortality and morbidity. We report the impact of a dedicated NNCC team on short term mortality and morbidities. **Methods:** A retrospective cohort study on neonates with moderate to severe HIE between July 1st 2008 and December 31st 2017. primary outcome : a composite of death and/or brain injury on MRI. Secondary outcomes: rate of cooling, length of hospital stay, anti-seizure medication burden, and use of inotropes. A regression analysis was done adjusting for gestational age, birth weight, gender, out-born status, Apgar score at 10 minutes, cord blood pH, and HIE clinical staging **Results:** 216 neonates were included, 109 before NNCC implementation, and 107 thereafter. NNCC program resulted in reduction in the primary outcome (AOR: 0.28, CI: 0.14-0.54, p<0.001) and brain injury (AOR: 0.28, CI: 0.14-0.55, p<0.001). It decreased average length of stay/infants by 5 days (p=0.03), improved cooling rate (73% compared to 93% , p <0.001), reduced: seizure misdiagnosis (71% compared to 23%, P <0.001), anti-seizure medication burden (P = 0.001), and inotrope use (34% compared to 53%, p=0.004) **Conclusions:** NNCC program decreased mortality and brain injury , shortened the length of hospital stay and improved care of neonates with significant HIE.