

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

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**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

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**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 with significant Hypoxic Ischemic Encephalopathy (HIE)

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**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 1<sup>st</sup> 2008 and December 31<sup>st</sup> 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.