

**P.006****Barriers and risk factors for emergency room visits vs smartphone app use for migraine in Canada and the United States***A Portt (Toronto)\**

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Background: Migraine affects more than 1 billion people, with attacks triggered by a variety of factors. Knowledge of environmental triggers for migraine attacks is limited, and has mostly been studied via emergency room (ER) visits. There are significant barriers and delays for attending ER for migraine treatment, which create challenges for estimating causal links to environmental exposures. We assessed whether smartphone app records may have fewer barriers and reduced lags. Methods: American and Canadian participants completed an online survey about their migraine attacks, smartphone app use, and ER visits. Results: Among 308 participants, barriers to visiting ER were similar in both countries, except for financial concerns in the US. About half of participants who attended ER also recorded the attack in a diary or app. Whereas migraine patients often present to ER 7+ days after onset, records in a smartphone app dataset were created within 2 days of onset. Conclusions: Although not all severe migraine attacks are recorded by smartphone users, smartphone app records may have fewer barriers to creation and shorter time lags compared to ER visit records, making them a rich source of data for research on transient neurologic health outcomes and environmental exposures.

**P.007****Role of neuroimaging in headache management; are we following the guidelines?***A Sajid (Guelph) AG Douen (Mississauga)\**

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Background: Healthcare systems incur a significant financial burden through unnecessary neuroimaging, which globally, is in the order of the billions of dollars. Current recommendations suggest avoiding neuroimaging in patients with stable headaches, particularly those meeting the criteria for migraine. Methods: We conducted a retrospective chart review of 100 headache patients in an outpatient neurology clinic. We evaluated the use of CT and MRI imaging and the impact of neuroimaging on clinical management. Results: 55% of patients had a history of migraine. Overall, 74 of 100 patients had either CT or MRI imaging. Imaging was largely normal or identified non-specific, clinically irrelevant findings. There was 1 case of a cerebellopontine angle epidermoid tumor and another of suspected MS. Neuroimaging did not alter headache management. Conclusions: The data is consistent with current guidelines suggesting that neuroimaging is not necessary in patients with stable headaches, particularly migraine. Neuroimaging overuse might reflect lack of awareness of guideline recommendations, insecurity over diagnoses, medicolegal concerns, as well as patients and primary practitioners' expectations. Resources to help improve public and physician awareness regarding neuroimaging use in patients with stable

headache may help reduce unwarranted imaging studies and could have significant financial savings for healthcare systems.

**MOVEMENT DISORDERS****P.008****Spontaneous retropulsion in autopsy verified PSP***J Das (Saskatoon)\* A Rajput (Saskatoon) A Rajput (Saskatoon) M Kim (Saskatoon) E Noyes (Saskatoon)*

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Background: Postural instability is a common symptom of progressive supranuclear palsy (PSP). Retropulsion is one form of postural instability. Spontaneous retropulsion involves loss of balance without external provocation. Others have reported on retropulsion in the clinical setting while testing for postural instability but rates of spontaneous retropulsion in the community have not been described. This study examines the prevalence of spontaneous retropulsion in PSP. Methods: A retrospective chart review examined 60 patients from the Saskatchewan Movement Disorders Program with clinical and pathology-confirmed diagnosis of PSP. We identified patients who endorsed spontaneous retropulsion. The data was analysed with univariate logistic regression. Results: The study included 43 males and 17 females. Spontaneous retropulsion was reported in 18 (30%) patients. Among the variables, only sex showed a statistical significance ( $p = 0.0184$ ) with females more likely to report spontaneous retropulsion (OR = 4.25). Other variables (PSP onset age, onset age of balance impairment, gait impairment, and disease duration) were not statistically significant. Conclusions: Our data suggest that spontaneous retropulsion is common in PSP, with females being at a significantly higher risk than males. This is useful information when counselling patients on risk-avoidance behaviour to prevent falls.

**MS/NEUROINFLAMMATORY DISEASE****P.009****Long-term comparative efficacy of inebilizumab from N-Momentum participants versus azathioprine and immunosuppressants and placebo in NMOSD patients***B Cree (San Francisco) B Suero (Burlington) S Walsh (Burlington) R Marignier (Lyon) JW Lindsey (Houston) H Kim (Goyang) D She (Thousand Oaks) D Cimborra (Thousand Oaks) K Patterson (Thousand Oaks)\* F Paul (Berlin)*

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Background: Long-term efficacy of inebilizumab (INEB), an anti-CD19+ B cell-depleting antibody approved for the treatment of seropositive-aquaporin-4-antibody (AQP4+) neuromyelitis optica spectrum disorder (NMOSD) was evaluated over