

MOVEMENT DISORDERS

P.066

Intrajejunal levodopa infusion (ILI) for Parkinson's Disease (PD): a Canadian experience

P Podgorny (Calgary)* P McCann (Edmonton) K Toore (Edmonton) G Tremain (Edmonton) A Lazarescu (Edmonton) O Suchowersky (Edmonton)

doi: 10.1017/cjn.2017.150

Background: ILI has been in use in Canada since 2011 to treat advanced PD. We review the benefits and complications of ILI for PD in a tertiary movement disorders center in Canada. **Methods:** Detailed chart review of patients treated with ILI at including motor UPDRS scores, ILI pump and PEG-J tube complications. Patients and caregivers were interviewed at regular clinic follow up about their experience with ILI. **Results:** 13 patients received ILI [10M, 3F; mean age 65.6 yrs, range (51.8-79.5); PD duration 14.2 yrs, range (9.1-22.0); mean follow-up 1.8 yrs, range (0.2-4.8)]. Patients reported improvement in motor function, decreased dyskinesias and 'OFF times' [mean motor UPDRS: pre-ILI 37.1, 1-6months post-ILI 27.5]. Common complications included dislodgement, knotting or blockage of the jejunal tube extension requiring endoscopic reinsertion (29 incidents in 6 patients over 5 yrs). Four patients discontinued Duodopa treatment, for reasons of declining cognition, inability to care for the pump, and/or minimal benefit. **Conclusions:** ILI is useful for the treatment of advanced PD, in patients that can care for the pump apparatus.

MS / NEUROINFLAMMATORY DISEASE

P.067

Steroid responsive life threatening acute hemorrhagic encephalomyelitis (AHEM) in a child with sickle cell disease (SCD)

A Alawadhi (Montreal)* C Saint-Martin (Montreal) S Abish (Montreal) N Ahmed (Montreal) J Atkinson (Montreal) F Bhanji (Montreal) G Sebire (Montreal)

doi: 10.1017/cjn.2017.151

Background: AHEM is a rare form of acute disseminated encephalomyelitis (ADEM) characterized by fulminant encephalopathy with hemorrhagic necrosis and most often fatal outcome. **Methods:** A case report and review of literature. **Results:** A 6-year-old girl known SCD presented an acute demyelinating syndrome (ADS) with diplopia due to unilateral fourth nerve palsy. She received (20mg/kg/day for 5 days) of IVMP (intravenous methylprednisolone). Two weeks after steroid weaning, she presented right hemiplegia. Brain MRI showed a left frontal necrotic-hemorrhagic lesion and new areas of demyelination. She showed signs of herniation and underwent craniotomy. Investigations ruled out vascular and infectious process in both events. The deterioration stopped concomitantly to the initiation of IVMP. She was discharged with a longer oral wean. Later, she was diagnosed with Crohn's disease and primary sclerosing cholangitis. We considered AHEM as the most plausible diagnosis based on the

clinical and radiological presentation, the preceding ADS, the exclusion of other etiologies, and the response to IVMP including resolution of non-necrotic lesions. Similar - but fatal - AHEM has been reported in 2 SCD patients. **Conclusions:** In any ADS occurring in the context of SCD and/or auto-immune condition, we recommend to slowly wean steroids, and to closely monitor the patient after weaning to quickly treat any recurrence with IVMP.

P.068

Real world experience with Fingolimod in Canada

V Bhan (Halifax)* Y Lapierre (Montreal) V Devonshire (Vancouver) F Emond (Quebec City) SA Morrow (London) JM Burton (Calgary) J Oh (Toronto) P Haddad (Dorval) R Schecter (Dorval)

doi: 10.1017/cjn.2017.152

Background: The Gilenya® Go Program™ offers education and support services, including coordination of first dose observation (FDO) and follow-up contact to reinforce monitoring recommendations and compliance in fingolimod-treated relapsing-remitting multiple sclerosis (RRMS) patients. **Methods:** Data were analyzed for patients enrolled in the Canadian Gilenya® Go Program™ from March 2011 to January 2016. The retention to fingolimod therapy, reasons for treatment discontinuation and incidence of adverse events (AEs) during treatment are reported. **Results:** At data cut-off, 3956 patients had completed FDO; 3201 patients were being actively treated. Mean age at enrolment was 41.0 years; 74.9% patients were female. The overall fingolimod exposure was 7869 patient-years. Most recent previous therapies (n=3746) included interferons (43.3%) and glatiramer acetate (29.6%). Most common reasons for switching to fingolimod (n=3674) was lack of efficacy (31.8%). Retention to therapy at data cut-off was 81.3%. AEs (45.2%) were the most common reason (n=334) for treatment discontinuation and included low lymphocyte count/abnormal hematology values (13.8%), gastrointestinal disturbances (6.9%), and elevated liver enzyme levels (7.8%). Adherence to recommended ophthalmic examination was 92.4%. **Conclusions:** In real-world clinical practice in Canada, adherence to both fingolimod treatment and monitoring was high. The Gilenya® Go Program™ helps to meet the safety monitoring recommendations for fingolimod-treated RRMS patients.

P.069

Vaccination protocol for MS patients undergoing immunosuppressive therapy: an important topic lacking consensus

R Busby (Victoria)* K Attwell-Pope (Victoria)

doi: 10.1017/cjn.2017.153

Background: As therapy for MS has expanded to include multiple immunomodulatory and immunosuppressive therapies, the need to consider patient vaccination status has emerged as a salient issue in the treatment of MS. Unfortunately, there is little research or consensus about how vaccination in these patients should be addressed. **Methods:** A search of primary literature on the topic of potential pathogens and available vaccinations in immunosuppressed patients was performed. We reviewed the limited available information in the MS, gastroenterology, and rheumatology literature. As well, the current Canadian immunization guide was referred to along with expert

opinion from public health nurses and infectious disease specialists. *Results:* There is currently little consensus about vaccination protocols for patients initiating immunosuppressive therapy. We integrated information from all of our sources to create a preliminary protocol for the vaccination of MS patients prior to initiation of immunosuppressive therapy. *Conclusions:* More work needs to be done to create standardized vaccination protocols for MS patients who will be undergoing immunosuppressive therapy. We have created a preliminary protocol in conjunction with public health to standardize the vaccinations that MS patients receive. We hope that this will streamline immunization of patients immediately after diagnosis of MS so that initiation of immunosuppressive therapy will not be delayed in the future.

P.070

Characteristics of patients presenting to a multiple sclerosis clinic in Hamilton, Ontario

CB Tomkinson (Hamilton)* JE Paulseth (Hamilton)

doi: 10.1017/cjn.2017.154

Background: Multiple sclerosis (MS) is a neurological disease which is highly prevalent in Canada. To date limited data exists on the characteristics of this population in Ontario. *Methods:* A retrospective chart review was conducted of initial patient presentations to a MS clinic in 2011. Initial and follow-up consult notes were reviewed. Patients with a previous MS diagnosis were excluded. *Results:* 81 patients presented to the clinic for the first time in 2011. 41 were given alternative diagnoses (non-MS). Of the remaining 40 patients (MS group), 9 had clinically or radiologically isolated syndrome and 8 were in a progressive phase of MS. The mean age of presentation was 22 (MS group) and 47 (non-MS group). The most common initial symptom in both groups was a sensory disturbance. The mean initial EDSS in the MS group was 1.75 (0-6.5). In the MS group only 35% were put on disease modifying treatments. The most common reasons for exclusion of treatment were progressive disease phase, clinically or radiologically isolated syndrome, and unclear diagnosis. In the non-MS group, the most common diagnoses were non-specific MRI findings, transverse myelitis and peripheral nerve or muscular diagnoses. *Conclusions:* This retrospective review has outlined the characteristics of a MS population in Ontario.

P.071

Multi-parametric MRI at 7 T enables differentiation of MS and age-related white matter lesions

A Wing Marques dos Santos (London)* Z Hosseini (London) M Drangova (London) D Rudko (Montreal) J Matusinec (London) R Menon (London) M Kremenchutzky (London)

doi: 10.1017/cjn.2017.155

Background: MRI criteria are used to support multiple sclerosis diagnosis and evolution. However, normal age-related lesions (ARLs) can be confounded with MS white matter lesion (MSL). *Methods:* Two Multiparametric 7T MRI scans 4 months apart from 5 relapsing MS (RMS) patients were analyzed and compared to 5 matched healthy controls (HC) aiming to differentiate MSLs from ARLs. Six-echo GRE, FLAIR and MPRAGE sequences were acquired. *Results:* Average size of ARLs was 51 mm³ and of MSLs was

69 mm³ (p=0.27). Both have the same general appearance on FLAIR and MPRAGE contrasts, but different contrast on the R2* and QS maps. Inter-visit variation on MPRAGE was significantly higher in MSLs. Inter-visit signal change in the other contrasts (QSM, R2* and FLAIR) was not significant. *Conclusions:* R2*, QS maps and inter-visit variation using MPRAGE allowed differentiating MSLs from ARLs in 5 RMS with mean long term disease duration. This could improve correct early diagnosis and accurate lesion load accumulation evolution.

NEUROMUSCULAR DISEASE

P.072

Effects of self-directed exercise on strength in Charcot-Marie-Tooth disease subtypes

D Djordjevic (Hamilton)* S Baker (Hamilton) S Fell (Guelph)

doi: 10.1017/cjn.2017.156

Background: Preliminary studies have supported the utility of exercise as a treatment for Charcot-Marie-Tooth disease (CMT) patients. Despite being the most common inherited neuropathy, there remains a paucity of guidelines for CMT management. *Methods:* A retrospective chart review was performed on 297 CMT patients. Self-reported exercise and strength results from standardized dynamometer testing were obtained from adult patients' first visits. Values were converted and analyzed based on previously reported age and sex matched normative values. *Results:* Participants with CMT2 were stronger than CMT1 in hand grip, elbow flexion, and dorsiflexion (p<0.05). CMT1A participants were weaker than those with CMT1B/D. Participants with CMT1 and CMT2 who exercised were statistically significantly stronger in elbow flexion and dorsiflexion than those who did not exercise. *Conclusions:* These preliminary results suggest that self-directed exercise is associated with greater strength in patients with CMT. Furthermore, they support the evidence that the dysmyelinating process in CMT1 may lead to greater loss of strength compared to the axonal degeneration in CMT2, and that exercise may benefit both subtypes. Self-directed exercise may be a convenient, sustainable, and effective method of improving strength and decreasing disability in these individuals. Future research should explore the type of exercise prescription that best addresses the needs of the CMT population.

P.073

Factors associated with fatigue in children and adolescents with Duchenne muscular dystrophy: A Canada-wide cross-sectional survey

B El-Aloul (London) Y Wei (London) K Speechley (London) C Campbell (London)*

doi: 10.1017/cjn.2017.157

Background: Fatigue is frequent and disabling in adults with neuromuscular disorders, but not well characterized in paediatric neuromuscular disorders. Recently, fatigue was reported to be associated with poor health-related quality of life in children with Duchenne muscular dystrophy (DMD). Determinants of fatigue—a