P.045

Quality of life and treatment satisfaction in onabotulinumtoxinA-treated cervical dystonia patients: multicentre, prospective, observational study, posture

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Background: Health-related quality of life (HRQoL) data is valuable, but limited. This analysis describes the impact of onabotulinumtoxinA treatment on HRQoL and level of treatment satisfaction in cervical dystonia (CD) patients. *Methods:* A multicenter, prospective, observational study in CD patients initiating onabotulinumtoxinA treatment (NCT01655862); ≤8 treatments administered at the physician's discretion. Primary measures (baseline, 4/8 weeks post-treatment, and before final treatment): pain numeric rating scale (PNRS) and cervical dystonia impact profile questionnaire (CDIP-58). Secondary measures (8 weeks post-treatment): patient/physician treatment satisfaction. *Results:* 61 patients (31.3-86.3 years old) were enrolled (efficacy cohort); majority had moderately severe CD (77.0%) and were female (77%). CDIP-58 domain and PNRS scores decreased from baseline, with significant changes ($p<.0001$) by 4 weeks post-treatment 3 (mean±SD): symptoms (-18.8±16.1), daily activities (-7.2±13.7), psychosocial sequelae (-17.4±13.4), and PNRS (-1.8±3.3). Most patients (78.0% and 94.4%) felt their condition was improved and majority of physicians (68.9% and 75.0%) indicated satisfaction with patients' responses following treatments 1 and 2, respectively. 27 patients reported 56 treatment-related adverse events (52 resolved, 4 ongoing); none were serious. *Conclusions:* No new safety signals were identified. Patients and physicians appear to be satisfied with onabotulinumtoxinA treatment for CD. Results suggest that onabotulinumtoxinA treatment may help improve HRQoL.

P.046

Can targeted exercises for nerve movement be effective for primary restless leg syndrome in adults with and without musculoskeletal pain?

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Background: Restless leg syndrome (RLS) is common with musculoskeletal pain conditions and has been associated with small fiber neuropathy. There are few reports of non pharmacological management of RLS. The purpose of this paper was to report the use nerve mobilization exercises in a group of patients with primary RLS with and without co-morbid chronic non specific low back pain (LBP). *Methods:* 26 consecutive patients (11M/14F) with primary RLS and LBP attended a mean of 12 physiotherapy sessions (range 4-16). Patients were given 3 neural mobilization exercises to do twice daily 15-20 repetitions. Outcome measures were: Global Rating of Change Scale (GROC); Restless Legs Syndrome Rating Scale (RLS-RS); and RLS Ordinal Scale (RLS-OS). Based on the RLS-RS 1 was very severe, 8 were severe and 17 were moderate. *Results:* Follow up was a mean of 14 months (range12-16). Mean baseline for the RLS-RS was 22.8. The mean change was 20.3 (range 14-26). The mean baseline for the RLS-OS was 4.3. The mean score at follow up was 1.2 (range 1-4). GROC changed a mean of 6.2 (range 3-7). *Conclusions:* The results suggest that targeted exercises may be useful in managing primary RLS. A level 1 clinical trial is warranted. Further research is needed to identify the mechanism of action.

P.047

Successful management of Parkinsonism in a schizophrenic patient

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Background: D2 receptor antagonists have been a mainstay in treating schizophrenia. Dopamine agonists used in the treatment of Parkinsonism can aggravate psychosis. Dopaminergic drugs with emphasis on other receptor subtypes with less D2 activation could reduce Parkinsonism in schizophrenic patients without seriously aggravating Parkinsonism. Rotigitine acts primarily on D3 receptors, while activity on other dopamine receptors is 8-20 times less. We report the successful treatment of a schizophenic patient with rotigitine and contend that its effectiveness relates to rotigitine's receptor profile. *Methods:* Single case study with follow-up. *Results:* A 67 year old woman with longstanding schizophrenia developed severe, progressive Parkinsonian features over 2 years despite stable antipsychotic therapy. More than one tablet of levodopa-carbidopa 100/25 precipitated psychosis. Risperidone was changed to cloazapine without benefit in Parkinsonism. The rotigitine patch was introduced and increased to 8 mg/24 hours without aggravating her mental status and produced considerable improvement in Parkinsonian features. *Conclusions:* Rotigitine is worth exploring as a treatment for severe Parkinsonism in patients with schizophrenia.

Multiple Sclerosis/ Neuroinflammatory

P.049

Medically refractory longitudinally extensive transverse myelitis successfully treated with cyclophosphamide induction

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Background: Longitudinally extensive transverse myelitis (LETM) is a demyelinating condition that is associated with diseases such as neuromyelitis optica spectrum disorder (NMOSD), acute disseminated encephalomyelitis, collagen vascular disease, or can be idiopathic. LETM can be severe enough to cause quadraparesis, marked sensory dysfunction, and respiratory failure. Rarely, these patients are unresponsive to conventional immune therapy. *Methods:* We report two cases of severe LETM with acute development of quadraparesis and respiratory failure requiring intensive care admission and failure to respond to high-dose corticosteroids, plasma exchange, IVIg and rituximab. Disease cessation and ultimately, significant recovery, was achieved after an 8-day cyclophosphamide induction. *Results:* A 21 yo female with antibody positive NMOSD and

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a 19 yo male with idiopathic LETM remained quadraparetic and ventilator dependent with active MRIs despite multiple courses of intravenous methylprednisolone, plasma exchanges, and in the NMOSD patient, IVIg and a 4-week course of rituximab. Both patients ultimately improved significantly and are now ambulatory with subsequent cyclophosphamide induction. *Conclusions:* In patients with severe LETM of presumed immune origin, who fail to respond to corticosteroids and plasma exchange, cyclophosphamide induction should be considered. This agent provides a more robust immunosuppressive response and can be induced rapidly. Cyclophosphamide effects and supportive evidence are further discussed.

P.050

Autoimmune encephalitis associated with GAD65 antibodies: brief review of the relevant literature

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Background: Recently, many cases of autoimmune encephalitis with positive GAD65 (*Glutamic acid decarboxylase*) antibodies have been described in the literature. However, it remains an understudied topic. *Methods:* We conducted a search on reported cases of anti-GAD65 encephalitis. Specific variables were identified as general characteristics, clinical manifestations, MRI and EEG findings, concomitant systemic autoimmune disorders and cancer, and outcome and autoantibodies findings. *Results:* We identified a total of 58 cases, from one to 70 years old. It most frequently presented with seizures (97%) and memory impairment (59%). It commonly occurred in association with systemic autoimmune disease, particularly diabetes (28%). Brain MRI was usually abnormal (78%); involvement of temporal lobes was more frequent than multifocal abnormalities (59% vs 16%). GAD65 antibodies were reported positive in CSF and/or serum (31% in serum only). Other antibodies such as GABABR, GABAAR and VGKC were concurrently reported positive in some cases (19%). However, we found that the vast majority of cases were not tested for all those cell-surface antibodies. Overall, no distinctive pattern of clinical and paraclinical findings was found. Persistent impairments were common. Optimal treatment remained undefined. *Conclusions:* Prospective studies recruiting patients with autoimmune encephalitis are needed to better elucidate the contributions of GAD65 autoantibodies, and to evaluate treatment and outcomes in this population.

P.051

Patient-reported adverse events on Multiple Sclerosis disease-modifying therapies in an urban tertiary MS clinic

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Background: Disease-modifying therapies (DMT) have been shown to reduce relapses and delay disability in individuals with relapsing-remitting multiple sclerosis (MS). However, these medications can cause adverse events (AE) leading to poor adherence. To better understand their clinical utility, this study examined real-life experiences with DMT in a tertiary MS clinic. *Methods:* A retrospective chart review (1999-2015) was conducted to evaluate the prevalence of AE and discontinuation rates of Health Canada approved DMT. *Results:* 445 MS patients who have used at least one DMT in their lifetime were reviewed. Among first-line injectable therapies, interferon beta (IFNβ) 1-α IM users (49.6%) were most likely to report an AE. Flu-like reactions and injection site reactions were the most commonly reported AE. Among first-line oral therapies, BG-12 users (58.5%) were most likely to report an AE. The most common AE were flushing and gastrointestinal upset. DMT that were most frequently discontinued as a result of AE were IFNβ 1-α SC (39.3%), IFNβ 1-α IM (36.8%) and BG-12 (34.6%). *Conclusions:* The prevalence of AE and discontinuation rate were congruent. In comparison with recent literature, this study demonstrated lower prevalence of AE but equivocal or higher discontinuation rates. This discrepancy could represent a more realistic depiction of the impact that DMT AE have on patients.

P.052

Late-onset adrenoleukodystrophy mimicking primary progressive multiple sclerosis

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Background: Adrenoleukodystrophy (ALD) is a peroxisomal disorder that leads to the accumulation of very long chain fatty acids in the body. Younger males typically present with a catastrophic cerebral demyelinating disease, while adult males tend to develop a progressive myelopathy and neuropathy. *Methods:* Case presentations and literature review. *Results: Case1:* A 58-year-old male with a three-year history of unsteady gait. His MRI showed multiple T2-hyperintensities most prominently in the posterior corpus collosum (which progressed over time) as well as spinal cord atrophy. Primary progressive multiple sclerosis (PPMS) was suspected. *Case 2:* The patient's bother, a 49-year-old, had a ten-year history of difficulty walking. MRI findings included a single large T2 hyper-intensity spanning the anterior aspect of the corpus collosum and an atrophic spinal cord. Given the family history, both brothers were investigated for and diagnosed with ALD. *Conclusions:* Both cases are of males presenting with a progressive myelopathy in middle age. In the first case, the history, physical exam, and imaging findings were most consistent with PPMS. However, the second case was less typical for MS prompting further investigations. These cases highlight the need to have a broad differential when confronted with atypical cases of MS and reminds the clinician of the phenotypic variability of ADL.

Neurocritical Care/ Neuro Trauma

P.054

The use of robotic technology to define post-operative neurological dysfunction in patients undergoing coronary bypass surgery: a feasibility study

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Background: Cognitive dysfunction following coronary artery bypass surgery is a regular occurrence, but its cause is still unknown.

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