

interviews and a neurological examination. Restless Legs Syndrome diagnostic criteria and the following inventories were used; Hospital Anxiety and Depression Scale, Brief Pain Inventory, and Pain Disability Index. Parkinson's disease patients had significantly greater anxiety severity, depression severity, pain severity, pain interference, pain disability, and restless legs syndrome prevalence in comparison to controls. In addition, Parkinson's disease patients' comorbid for anxiety and depression had significantly greater pain severity, pain interference, and pain disability, but not RLS prevalence, in comparison to Parkinson's disease only, Parkinson's disease anxiety, and Parkinson's disease depression patients. Pain interference, pain severity, and pain disability is greater among Parkinson's disease patients with anxiety and depression, in comparison to Parkinson's disease patients without anxiety and depression. On the contrary, the prevalence of restless legs syndrome was not found to be relevant.

### P.036

#### Prevalence of essential tremor in an idiopathic Parkinson's disease patient population

*A Rana (Toronto)\* AM Qureshi (Toronto) MA Rana (Townsville) M Rahman (Toronto) I Abdullah (Toronto) D Qureshi (Hamilton)*

doi: 10.1017/cjn.2015.147

Objective of this study was assess the prevalence of Essential of Essential Tremor in Parkinson's disease population Essential tremor (ET) is the most common movement disorders and is much more common than Parkinson's disease, in general population. Essential Tremor and Parkinson's disease (PD) tremor differ in type, frequency and distribution. Despite being two separate disorders, there have been cases reported of coexistence of ET-PD. Some studies have reported an increase in the incidence of ET in relatives of patients with PD, yet the risk of developing PD in ET patients has not been thoroughly investigated. Our study set out to determine the prevalence of precedent ET in PD patients. We conducted a retrospective chart review analysis of 332 idiopathic PD patients to determine how many of them had ET prior to the diagnosis of PD and the percentage of them who were also diagnosed with ET. Our results indicated that the prevalence of precedent ET among a population of idiopathic PD patients was not any higher than the prevalence of ET in a comparable general population. Our results support the notion that ET and PD are mutually independent disorders. Further studies are needed to understand the exact relationship between these two disorders

### P.037

#### Vietnamese patient with progressive ataxia and palatal tremor syndrome

*A Jahangirvand (Saskatoon) K Sawicka (Saskatoon)\* S Kennedy (Saskatoon)*

doi: 10.1017/cjn.2015.148

*Background:* We present clinical and MRI features of progressive ataxia and palatal tremor (PAPT). *Case Report:* A 67 year-old gentleman visiting from Vietnam presented with intermittent stroke-like episodes consisting of facial weakness, dysarthria, and oscillopsia. He reported gradually worsening ataxia and dysequilibrium over 4 years. Examination revealed small amplitude nystagmus towards the right, impaired VOR to the left, palatal tremor, left-sided

dysmetria, and an unsteady gait. MRI of the brain demonstrated increased T2/FLAIR signal within the inferior olive. Contrast enhanced and diffusion sequences were normal. MRA was normal. Electrocardiography, telemetry, and echocardiogram were normal. CSF was normal. Glial fibrillary acidic protein (GFAP) and vitamin E levels were normal. Genetic testing for hereditary forms of ataxia including spinocerebellar ataxia was not completed. *Conclusion:* Palatal tremor is commonly classified into symptomatic or essential subgroups. Symptomatic palatal tremor is frequently caused by a lesion in the triangle of Guillain and Mollaret leading to hypertrophic olivary degeneration. A subgroup of symptomatic palatal tremor form a syndrome of PAPT. Published details of cases of PAPT are sparse and the disorder appears to be mainly sporadic. Common features include progression of ataxia, olivary degeneration, gaze-evoked nystagmus, and internuclear ophthalmoplegia. There is no known effective treatment for progressive ataxia, which is the most disabling symptom of PAPT.

## NEUROLOGY (MULTIPLE SCLEROSIS)

### P.039

#### Cognitive evolution in tysabri treated Multiple Sclerosis patients

*FH Jacques (Gatineau) B Harel (New Haven) A Schembri (Melbourne) C Paquette (Gatineau) B Bilodeau (Gatineau)\* P Kalinowski (Melbourne)*

doi: 10.1017/cjn.2015.149

*Objectives:* The objectives of this study are to understand the impact of natalizumab on cognition beyond two years of therapy and to investigate whether baseline characteristics are predictive of clinical response. *Methods:* This is a single-center, 24-month, observational study. Sixty-three patients treated with natalizumab were assessed prior to monthly infusions using a Cogstate battery and the SDMT. A linear mixed model was conducted with duration of natalizumab therapy as a between-subjects factor ( $\leq 2$  or  $> 2$  years), assessment as a within-subjects factor, and MSSS as a covariate. *Results:* There were no statistically significant differences between the key demographic variables aside for the MSSS ( $p=0.0074$ ). No patient showed evidence of sustained cognitive deterioration over the 24 month period. Irrespective of time on natalizumab, significant improvements were observed at the group level in executive function, verbal memory and working memory, whereas processing speed and attention remained unchanged. Impaired cognition or any other baseline parameter did not influence the trajectory of cognitive change over 24 months. *Conclusion:* Our results suggest that natalizumab preserves cognitive function, including the ability to learn, for 4 years and beyond of continuous therapy. This occurs irrespective of baseline characteristics.