Abstracts

Movement disorders in early MS and related diseases: A prospective observational study

**Background** Little is known about the true prevalence and clinical characteristics of movement disorders in early multiple sclerosis (MS) and related demyelinating diseases. We conducted a prospective study to fill this knowledge gap.

**Methods** A consecutive patient sample was recruited from the MS clinic within a 1-year-period. Patients diagnosed over 5 years before the study start date were excluded. Each eligible patient was interviewed by a movement disorder neurologist who conducted a standardized movement disorder survey and a focused examination. Each patient was followed prospectively for 1–4 follow-up visits. Movement disorders identified on examination were video-recorded and videos were independently rated by a separate blinded movement expert.

**Results** Sixty patients were included (56.6% female, mean age 38.3 ± 12.7 years). Eighty percent reported one or more movement disorders on the survey and 38.3% had positive findings on examination. After excluding incidental movement disorders (e.g., essential tremor), 58.3% were thought to have demyelination-related movement disorders. The most common movement disorders in a descending order were restless legs syndrome, tremor, tonic spasms, myoclonus, focal dystonia, spontaneous clonus, fasciculations, pseudoathetosis, hyperekplexia, and hemifacial spasm. The movement disorder started 5 months following a relapse on average but in 8 patients it was the presenting symptom of a new relapse or the disease itself. The majority of movement disorders occurred secondary to spinal (85.7%) or cerebellar/brainstem lesions (34.2%). Spinal cord demyelination was the only statistically significant predictor of demyelination-related movement disorders.

**Conclusion** Movement disorders are more common than previously thought even in early MS. They typically begin a few months after spinal or brainstem/cerebellar relapses but may occasionally be the presenting symptom of a relapse.

**Signs heralding appearance of thymomas after extended thymectomy for myasthenia gravis**

**Purpose of review** Thymomas appear very rarely after extended thymectomy for early-onset myasthenia gravis (EOMG). We describe 2 such cases that highlight potential early warning signs.

**Recent findings** In their 20s, one woman and one man developed EOMG (AChR antibody-positive), requiring extended transsternal removal of hyperplastic thymus at ages 35 and 27, respectively. Their myasthenia gravis was readily controlled for the next 10 and 7 years before deteriorating in both, with appearance of late clinical features and anticytokine autoantibodies suggesting underlying thymomas, namely respiratory infections, genital herpes, chronic candidiasis, and alopecia in the woman and erythrodema and lichen planus in the man, followed by *Pseudomonas*, *Klebsiella*, and cytomegalovirus infections plus chronic hepatitis during intensifying immunosuppressive therapy. Type B thymomas were then detected. Despite surgery or radiotherapy, and intensive drug therapy, the patients died 7 and 1 year later.

**Summary** Certain infections/dermatologic manifestations that associate with long-standing thymomas may herald their late appearance, despite previous thymectomy.