Fatigue and excessive daytime sleepiness should be assessed separately in Parkinson's

December 1 2010

Nearly three-quarters of patients with Parkinson's disease experience fatigue or excessive daytime sleepiness (EDS), but clinicians should assess both problems separately in order to improve the profession's understanding of their distinct, but overlapping, physiology. That is the key finding of a study published in the December issue of the *European Journal of Neurology*.

Researchers from the University Hospital of Zurich, Switzerland, studied 88 outpatients with Parkinson's. They found that 72% suffered from fatigue or EDS, with just under half of them suffering from both.

"Sleep-wake disturbances such as fatigue and EDS are important non-motor features of Parkinson's" says co-author Dr Christian Baumann. "Their causes remain elusive, but it is possible that multiple factors such as neurodegeneration and medication contribute to them.

"It is important that physicians assess these symptoms, because they have a marked impact on patients' motor functions, everyday activities and quality of life.

"EDS tends to affect up to 50% to 75% of Parkinson's disease patients. This is higher than in other brain disorders such as multiple sclerosis, ischaemic stroke and traumatic brain injury. Fatigue is estimated to affect 40% to 60% of patients with Parkinson's disease, but is often not diagnosed.

"The aim of our study was to systematically assess EDS and fatigue in Parkinson's disease, to determine the overlap between the two symptoms and associate them with other motor and non-motor symptoms and dopaminergic medication."

Eighty-eight consecutive patients aged 38 to 84 attending a movement disorders clinic over a ten-month period were included in the study. Their average age was 67.5 years and 69% were male. Disease duration ranged from two to 28 years, with an average of just under ten years.

Key findings included:

- 72% of patients suffered from fatigue, EDS or a combination of both. 59% reported fatigue, 24% on its own and 35% with EDS. 48% reported EDS, 13% on its own and 35% with fatigue.
- Fatigued patients were almost twice as likely to suffer from EDS than non-fatigued patients (60% versus 31%).
- EDS was more common and severe with longer disease duration, but the same pattern was not observed when it came to fatigue.
- Fatigued patients with Parkinson's disease had more severe motor symptoms than patients without fatigue. They were also more likely to suffer from Parkinson's-related insomnia than patients without fatigue (77% versus 53%), autonomic disturbances (46% versus 19%) and depression (52% versus 28%).
- Insomnia was more prevalent in patients with EDS than without (79% versus 57%) but the researchers found no differences when it came to severity of motor symptoms, hallucinations, autonomic

disturbances or depression.

- Increased sleep duration (hypersomnia) was associated with fatigue but not EDS. The 17% of patients who reported increased sleep duration were more likely to be severely affected by motor symptoms than patients with average sleep duration, but did not show an increase in other symptoms.

- Most of the patients (50%) were receiving a combination of levodopa and a dopamine agonist, 38% were just receiving levodopa and 10% were just receiving a dopamine agonist. No patients were on rasagiline or selegiline.

- Dopaminergic treatment exerted a stronger influence on EDS than on fatigue. When dopamine agonists were combined with levodopa, this made EDS even worse.

"Our findings suggest that although fatigue and EDS often co-exist in patients with Parkinson's they are differently associated with severity of motor symptoms, disease duration, depression and dopaminergic treatment" concludes Dr Baumann. "For this reason, we feel that fatigue and EDS should be separately assessed in patients with Parkinson's in order to improve our understanding of their distinct but overlapping physiology."

More information: Fatigue and excessive daytime sleepiness in idiopathic Parkinson's disease differently correlate with motor symptoms, depression and dopaminergic treatment. Valko et al. European Journal of Neurology. 17, pp1428-1436. (December 2010). DOI: 10.1111/j.1468-1331.2010.03063.x