



## **Sleep disorders: alarm signals for the early detection of neuroimmunological diseases**

*Sleep disorders are often the first sign of serious neurological diseases. Neurologists should inquire extensively about the quality of their patients' sleep. This point was emphasized by experts at the Congress of the European Academy of Neurology in Lisbon. In rare neuroimmunological diseases sleep and wakefulness also frequently play an important role.*

**Lisbon 16 June 2018** – If patients report suffering from sleep disorders, alarm bells should go off for neurologists. These conditions are often a first sign of serious neurological diseases. This is true of abnormal sleep behaviour as well as excessive sleepiness or insomnia. “Two thirds of the population suffering from REM sleep disorders later develop Parkinson’s disease, Lewy body dementia or multiple system atrophy,” Dr Konstanze Philipp (Munster) reported at the 4<sup>th</sup> Congress of the European Academy of Neurology (EAN) in Lisbon.

REM sleep behaviour disorder (Schenk syndrome) manifests itself in the loss of what is known as physiological muscle atonia during REM sleep. This paralysis causes muscles to relax in healthy sleeping individuals who are dreaming. If this inhibition is lost, the affected individuals move, cry out, and flail around with their arms and legs during the REM sleep and can injure themselves and their partner. In combination with certain biological markers, these neurodegenerative diseases could be diagnosed in the future years before the first consciously perceived symptoms occur. However, anyone looking through health records for a patient’s documented sleep history seldom finds one. Dr Philipp: “We have to raise awareness on this matter. Improved early detection in the future could also improve the therapeutic results.” For instance, there is the well-founded hope that new therapeutic approaches can prevent, or at least delay, the breakout of Parkinson’s disease, provided treatment begins very early on.

### **Active while sleeping – possible sign of autoimmune disease**

Insomnia or poor sleep quality can also indicate rare neuroimmunological illnesses caused by antibodies. Dr Philipp illustrated this point at the EAN Congress by citing three cases as examples. Case 1: A 69-year-old man reported he had recently been very active in his sleep, causing him to fall out of bed twice. He went on to say that his sleep was no longer restful and that he kept falling asleep involuntarily during the day. A few months later, the man developed gait abnormalities, had ocular motor problems, and also chorea-like movement disorders entailing involuntary, jerky and irregular movements. It was not until then that he was diagnosed with an autoimmune disorder discovered just a few years ago, namely, anti-IgLON5 disease or autoimmune encephalopathy with parasomnia and obstructive sleep apnoea. The syndrome is characterized by a complex, advanced sleep disorder and is triggered by antibodies against IgLON5, a neural cell adhesion molecule.

### **Sleepiness during the day or insomnia as initial signals**

The two other examples that Dr Philipp cited from her case analyses are as follows. Case 2: After a long investigation, a 33-year-old man was diagnosed with Ma2 antibody encephalitis

caused by a germ cell tumour. A year and a half prior to the diagnosis, the young man had already been suffering from extreme daytime sleepiness, hypnagogic hallucinations, and sleep paralysis. It was not until a sleep lab determined he had narcolepsy originating in the central nervous system that his physicians began zeroing in on the actual problem and the right diagnosis. Case 3: For a 51-year-old patient, sleep disorders were also the first signals of a severe neuroimmunological disease. He suffered from insomnia for two years. Then various muscular symptoms such as myalgia, cramps and fasciculations occurred. At that point his physicians finally diagnosed him as having Morvan's syndrome, a type of autoimmune encephalitis associated with antibodies against the Contactin-associated protein 2 (CASPR2).

Dr Philipp made this appeal: "Asking questions, listening and documenting are least expensive and easiest ways of diagnosing these complex diseases. We should use them. The therapeutic approaches are still expandable. Nonetheless, early detection is essential, especially for neurodegenerative disorders."

Source: Abstract 4<sup>th</sup> EAN Congress Lisbon 2018: EPO3111 K. Philipp et al: Sleep disorders: A key symptom in multiple neurological disorders

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