Electroencephalographic finding in idiopathic REM sleep behavior disorder

The REM sleep behavior disorder (RBD) is a type of parasomnia manifested by vivid, often frightening dreams associated with motor behaviors during REM sleep, sometimes causing injuries to patients themselves or to their bed partners. The polysomnographic features of RBD include increased muscle activity during REM sleep (REM sleep without atonia). The majority of RBD-affected persons are older men. The disorder might be idiopathic (iRBD) or secondary to neurological disorders of various kinds. iRBD management with pharmaceutical measures is usually straightforward and effective. Several longitudinal studies have revealed that a high proportion of iRBD patients convert to α-synucleinopathies such as Parkinson's disease and dementia with Lewy body disease (DLB). Considering this, many studies have been conducted to identify common clinical markers between α-synucleinopathies and iRBD or indicators for the future development of α-synucleinopathies in iRBD patients. In this context, electroencephalographic (EEG) slowing occurring while awake and asleep, which is frequently observed in DLB, has received much attention. Clarification of the association between EEG slowing and the presence of mild cognitive impairment, which is also commonly seen in early stages of DLB, has been particularly expected to offer a breakthrough for the identification of cases which might convert to α-synucleinopathies. In this article, we introduce the progress in quantitative EEG research in iRBD during the past decade. We also discuss the relationship between EEG findings and cognitive decline as well as the mechanisms of EEG changes or cognitive abnormalities in patients with the disorder.

Biography

Yuichi Inoue has completed his MD from Tottori University Faculty of Medicine, Tottori Pref. in the year 1987, BS from Tokyo Medical University-Tokyo in 1982. He worked as a Professor of Psychiatry in Tokyo Medical University in 2007 and became Director of Japan Somnology Center Neuropsychiatric Research Institute in 2008, in the same year he was the Professor of Somnology at Tokyo Medical University and became President of Yoyogi Sleep Disorder Center in 2011. He is involved in The Japanese Society of Sleep Research, Japanese Society of Biological Psychiatry, Japan Society of Neurovegetative Research, World Federation of Sleep Research Society and World Sleep 2015 as Board of Director, Board of Councilor, Programme Committee Co-chair and Organizing Committee Chair respectively. He has more than 190 publications on his name in English language.

inoue@somnology.com

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