Abnormal muscle rigidity during sleep in dementia with Lewy bodies

Dementia with Lewy bodies (DLB) is a common type of dementia accompanying with parasomnia and parkinsonism. In this key note lecture I will review rapid eye movement (REM) sleep behavior disorders (RBD) in DLB. I also focus on abnormal muscle rigidity during REM sleep in DLB. First, a case of a patient with marked muscle rigidity of extremities and trunk in dementia will be presented. A 75 years old man showed marked muscle rigidity in upper and lower extremities and trunk. He showed severe dementia with 4/30 score in Mini-mental State Examination. CT scan and MRI exhibited no abnormality except for severe brain atrophy. SPECT with ECD showed decrease of CBF in bilateral frontal and occipito-parietal regions. Dopamine transporter SPECT exhibited decreased uptake of the transporter in the putamen and the globus pallidus. In the daytime he showed exploratory activity of the arms trying to capture something in the air as if he looked for materials in visual hallucination. No abnormal behavior during sleep such as RBD was seen. However, he occasionally showed marked muscle rigidity of extremities and trunk during sleep. L-dopa treatment resulted in mild improvement of motor activity but no changes in cognitive activity. RBD in DLB and loss of muscle atonia during REM sleep in DLB will be reviewed. The medullary magnocellular reticular formation and the locus coeruleus have important role in skeletal muscle atonia during REM sleep. Mechanism of abnormal muscle rigidity during sleep in DLB will be discussed.

Biography

Toru Itakura has completed his MD at the age of 24 years from Wakayama Medical University and postdoctoral studies from Wakayama Medical University School of Medicine. He is President of Wakayama Medical University and Professor of Department of Neurological Surgery. He has published more than 200 papers in reputed journals.

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