

Editorial

Behavioural and Cognitive Changes in Lewy Body Dementias

Woon-Man Kung ^{1,2,3} **Ying-Jui Ho** ⁴ **Hiroshi Yoshizawa**,⁵ **Shinro Matsuo**,⁶
and Cheng-Yu Wei ^{1,7}

¹Department of Exercise and Health Promotion, College of Education, Chinese Culture University, Taipei, Taiwan

²Division of Neurosurgery, Department of Surgery, Taipei Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, New Taipei City, Taiwan

³Department of Surgery, School of Medicine, Buddhist Tzu Chi University, Hualien, Taiwan

⁴Department of Psychology, Chung Shan Medical University Hospital, Chung Shan Medical University, Taichung, Taiwan

⁵Department of Neurology, Neurological Institute, Tokyo Women's Medical University, Kawadacho, Shinjuku, Tokyo, Japan

⁶Department of Nuclear Medicine, Kanazawa University Hospital, Takaramachi, Kanazawa, Japan

⁷Department of Neurology, Chang Bing Show Chwan Memorial Hospital, Changhua County, Taiwan

Correspondence should be addressed to Woon-Man Kung; nskungwm@yahoo.com.tw

Received 18 October 2018; Accepted 18 October 2018; Published 11 November 2018

Copyright © 2018 Woon-Man Kung et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Dementia with Lewy bodies (DLB) and Parkinson's disease dementia (PDD) share many clinical and pathological features. They are therefore discussed together and referred to as Lewy body dementias (LBD).

Incidence of DLB seems low. It is plausible that a systematic review of population and clinical studies is more appropriate to estimate prevalence. A recent interesting study addressed the mean prevalence of DLB to be 4.2% and 7.5% in community and healthcare unit, respectively [1]. Another epidemiological article showed the incidence rate of DLB in the United States to be 3.5 per 100,000 person-years but increased steeply to 31.6 per 100,000 person-years among people older than 65 years [2].

After rigorous peer review, we decided to include 10 manuscripts in this special issue, including both research studies and reviews. S.-K. Yang et al. reported the incidence of DLB in Taiwan to be 7.1 per 100,000 person-years while the comorbidity rates of hypertension and hyperlipidemia in DLB patients were higher in females than in males.

Another retrospective longitudinal study conducted by P.-H. Chen et al. implied that 17.2% of patients with mild cognitive impairment progressed to LBD, while older age and higher Clinical Dementia Rating Scale-Sum of Boxes (CDR-SB) were the associated risk factors of progression.

An extensive meta-analysis study conducted by Y.-C. Wang et al. evaluated and clarified the correlation between antidepressants and dementias.

Advanced age, male sex, and a family history of dementia are risk factors of DLB [3]. C.-K. Cheng et al. further discovered evidence demonstrating that metabolic risk factors are important to DLB, and DLB might have higher risk of ischemic stroke, basing on large-scale nationwide, population-based information obtained from the Taiwan National Health Insurance Research Database.

C.-Y. Lee et al. reported the first review article to date focusing on the quality of life in DLB patients.

Psychotic symptoms with recurrent visual hallucination and altered sleep and arousal behaviour are both important features of DLB [4]. In a retrospective registry study, R.-C. Tzeng et al. proposed a high incidence of 51.2% of DLB patients with delusional feature.

P.-C. Chan et al. further did a systemic review on this important issue. They summarized and reviewed the history, clinical manifestations, possible pathophysiologies, and treatment of DLB and REM sleep behaviour disorder (RBD).

Basic science inevitably is the cornerstone of clinical practice. Occipital hypometabolism is a hallmark feature in DLB [5]. By comparing FDG-PET images between DLB

patients and healthy subjects, D. Chen et al.'s laboratory investigated brain metabolism patterns in DLB patients.

Treatment of LBD is challenging in everyday practice. Ceftriaxone is a β -lactam antibiotic and was suggested to have a potential role in neurodegenerative diseases. By using manganese-enhanced magnetic resonance imaging (MEMRI) and immunohistochemistry, Professor Y.-J. Ho et al. found that ceftriaxone treated DLB rat with improved neuronal density and activity in the hippocampal CA1 area, suppressed hyperactivity in the subthalamic nucleus, and reduced α -synuclein accumulation.

Hericium erinaceus is an edible mushroom with medicinal and some important physiological components [6]. I.-C. Li et al.'s laboratory reviewed the properties of the mycelia and suggested further research into its therapeutic role.

In this special issue, the authors aim to bring a multidisciplinary perspective and updated insight into the most recent advances in the field of LBD. We hope the efforts should progress our further understanding of the disease.

Conflicts of Interest

I declare that we have no conflict of interest or private agreements with companies concerning the manuscripts in this Special Issue.

Acknowledgments

The editors would like to express their deepest regards to all the featured authors for their informative high-quality contributions. Moreover, our most sincere appreciation is given to all the reviewers for their endless support yet valuable inputs. We are also deeply grateful to the journal for hosting and assisting in all aspects to make this special issue possible.

Woon-Man Kung
Ying-Jui Ho
Hiroshi Yoshizawa
Shinro Matsuo
Cheng-Yu Wei

References

- [1] S. A. Vann Jones and J. T. O'Brien, "The prevalence and incidence of dementia with Lewy bodies: a systematic review of population and clinical studies," *Psychological Medicine*, vol. 44, no. 04, pp. 673–683, 2014.
- [2] R. Savica, B. R. Grossardt, J. H. Bower, B. F. Boeve, J. E. Ahlskog, and W. A. Rocca, "Incidence of dementia with Lewy bodies and Parkinson disease dementia," *JAMA Neurology*, vol. 70, no. 11, pp. 1396–1402, 2013.
- [3] P. T. Nelson, G. A. Jicha, R. J. Kryscio et al., "Low sensitivity in clinical diagnoses of dementia with Lewy bodies," *Journal of Neurology*, vol. 257, no. 3, pp. 359–366, 2010.
- [4] Z. Walker, K. L. Possin, B. F. Boeve, and D. Aarsland, "Lewy body dementias," *The Lancet*, vol. 386, no. 10004, pp. 1683–1697, 2015.
- [5] M. Filippi, F. Agosta, F. Barkhof et al., "EFNS task force: the use of neuroimaging in the diagnosis of dementia," *European Journal of Neurology*, vol. 19, no. 12, pp. 1487–1501, 2012.
- [6] M. A. Khan, M. Tania, R. Liu, and M. M. Rahman, "*Hericium erinaceus*: an edible mushroom with medicinal values," *Journal of Complementary and Integrative Medicine*, vol. 10, no. 1, 2013.