

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Respiratory dysrhythmia in Dementia with Lewy bodies: a cross-sectional study
AUTHORS	Yamaguchi, Yasuhiro; Hibi, Shinichiro; Umeda-Kameyama, Yumi; Iijima, Katsuya; Takahashi, Miwako; Momose, Toshimitsu; Akishita, Masahiro; Ouchi, Yasuyoshi

VERSION 1 - REVIEW

REVIEWER	Dr. Shinju Teramoto Tsukuba University Ibaraki, Japa
REVIEW RETURNED	03/13/13

GENERAL COMMENTS	<p>Major</p> <p>The clinical features of dementia with Lewy bodies (DLB) during wakefulness are well known. Other than rapid eye movement (REM) sleep behavior disorder, only limited data exists on other sleep disturbances and disorders in DLB.</p> <p>This is a quite interesting study concerning physiologic futures of Dementia with Lewy bodies. There is an evidence of polysomnographic abnormalities in dementia with Lewy bodies (Neurologist. 2013;19(1):1-6.). However the knowledge of breathing pattern of dementia with Lewy bodies is very limited. The authors' findings may be an important feature of dementia with Lewy bodies. Very impressively, fig 4 suggests the coefficient of variation for breath-to-breath respiratory time is physiologically associated with and the value of Shannon Entropy S, indicating that DLB pathology may affect the breathing pattern.</p> <p>Week point is a scanty of participated patients.</p> <p>In the discussion section, influence of hypertension on breathing pattern should be discussed, since the hypertensive patients are greater in AD group than in DLB group.</p> <p>Minor</p> <p>Two recent papers published in Neurologist. 2013 and J Clin Neurol. 2013 may be cited.</p>
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REVIEWER	Clive Ballard Professor of Age Related Diseases King's College London
	No conflicts of interest
REVIEW RETURNED	07/03/13

THE STUDY	No supplemental documents that should be included in the main manuscript.
GENERAL COMMENTS	<p>Really interesting and novel findings, which are well presented.</p> <p>The main limitations are the sample size and the inclusion of people with possible DLB -which are addressed in the discussion.</p> <p>Only 2 further comments</p> <p>1/ Could the authors either confirm that the assessment of respiratory measures was undertaken and analysed blind to diagnosis, or otherwise include this as a limitation.</p> <p>2/It may be better to use the phrase "without dementia" rather than "non-demented".</p>

VERSION 1 – AUTHOR RESPONSE

In Response to Dr Teramoto:
Thank you for your advice.

1. Major

In the discussion section, influence of hypertension on breathing pattern should be discussed, since the hypertensive patients are greater in AD group than in DLB group.

Thank you for your comment. Certainly the number of patients in each group was relatively small, as commented in discussion. We could not completely rule out the contribution of other comorbid factors to breathing pattern. We added the discussion on the influence of hypertension as follows.

“Although the complication with hypertension was greater in AD group than in DLB group, no significant differences had been found in the measures of breathing patterns between the patients with hypertension and the patients without hypertension (data not shown).”

We also added the following sentence as a limitation.

“We could not rule out the contribution of other comorbid factors to irregular breathing.”

2. Minor

Two recent papers published in Neurologist. 2013 and J Clin Neurol. 2013 may be cited.

Thank you for your indication. We cited the two papers.

[11] Ahn SH, Kim JH, Kim DU, et al. Interaction between Sleep-Disordered Breathing and Acute Ischemic Stroke. J Clin Neurol 2013;9(1):9-13.

[21] Pao WC, Boeve BF, Ferman TJ, et al. Polysomnographic findings in dementia with Lewy bodies. Neurologist 2013;19(1):1-6.

In Response to Dr Ballard:

Thank you for your advice.

1. Could the authors either confirm that the assessment of respiratory measures was undertaken and analysed blind to diagnosis, or otherwise include this as a limitation.

Thank you for your advice.

The assessment of respiratory measures and the diagnosis of dementia were performed independently, and actually, the raters of respiratory measures had obtained little information about the clinical symptoms in most of the subjects. Furthermore, the analysis of breathing pattern had been made objectively according to the pre-determined protocol. However, we added the comment on this limitation in discussion as follows.

“Third, we could not make the raters of respiratory measures completely blinded to the clinical

symptoms of the patients, although the final diagnosis of dementia had been made independently, and the analysis of respiratory measures had been performed objectively according to the pre-determined protocol.”

2. It may be better to use the phrase "without dementia" rather than "non-demented".
We changed the phrase "without dementia" to the phrase "non-demented".

I confirm that all of the authors have approved the above changes.

Yours sincerely,
Yasuhiro Yamaguchi