

## Accepted Manuscript

Title: Characteristics of gray matter morphological change in Parkinson's disease patients with semantic abstract reasoning deficits

Authors: Li Wang, Kun Nie, Xin Zhao, Shujun Feng, Sifen Xie, Xuetao He, Guixian Ma, Limin Wang, Zhiheng Huang, Biao Huang, Yuhu Zhang, Lijuan Wang



PII: S0304-3940(17)31020-0  
DOI: <https://doi.org/10.1016/j.neulet.2017.12.047>  
Reference: NSL 33319

To appear in: *Neuroscience Letters*

Received date: 10-7-2017  
Revised date: 26-11-2017  
Accepted date: 20-12-2017

Please cite this article as: Li Wang, Kun Nie, Xin Zhao, Shujun Feng, Sifen Xie, Xuetao He, Guixian Ma, Limin Wang, Zhiheng Huang, Biao Huang, Yuhu Zhang, Lijuan Wang, Characteristics of gray matter morphological change in Parkinson's disease patients with semantic abstract reasoning deficits, *Neuroscience Letters* <https://doi.org/10.1016/j.neulet.2017.12.047>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Characteristics of gray matter morphological change in Parkinson's disease patients with semantic abstract reasoning deficits

Li Wang,<sup>a</sup> Kun Nie,<sup>b</sup> Xin Zhao,<sup>b</sup> Shujun Feng,<sup>b</sup> Sifen Xie,<sup>b</sup> Xuetao He,<sup>b</sup> Guixian Ma,<sup>b</sup> Limin Wang,<sup>b</sup> Zhiheng Huang,<sup>b</sup> Biao Huang,<sup>c</sup> Yuhu Zhang,<sup>b\*\*</sup> Lijuan Wang,<sup>b a\*</sup>

<sup>a</sup>Department of Graduate School, Southern Medical University, Guangzhou 510515, Guangdong Province, PR China.

<sup>b</sup>Department of Neurology, Guangdong Neuroscience Institute, Guangdong General Hospital, Guangdong Academy of Medical Sciences, Guangzhou 510080, Guangdong Province, PR China.

<sup>c</sup>Department of Radiology, Guangdong General Hospital, Guangdong Academy of Medical Sciences, Guangzhou 510080, Guangdong Province, PR China.

\* Corresponding author Address: Department of Neurology, Guangdong Neuroscience Institute, Guangdong General Hospital, Guangdong Academy of Medical Sciences, 106 Zhongshan Rd II, Guangzhou 510080, Guangdong Province, People's Republic of China; Department of Graduate School, Southern Medical University, Guangzhou 510080, Guangdong Province, PR China. E-mail address: wljgd68@163.com. Tel: +86-020-83827812-10402

\*\* Co-corresponding author Address: Department of Neurology, Guangdong Neuroscience Institute, Guangdong General Hospital, Guangdong Academy of Medical Sciences, 106 Zhongshan Rd II, Guangzhou 510080, Guangdong Province, People's Republic of China. E-mail address: yzhzhangsd@126.com. Tel: +86-020-83827812-10402

### Highlights

- PD patients have semantic abstract reasoning deficit.
- Cortical thinning in the left superior frontal, superior parietal and rostral middle frontal regions predict semantic abstract reasoning deficit among Chinese PD patients.
- Atrophy in the right hippocampus is associate with semantic abstract reasoning deficit in PD.
- Impaired conceptual abstraction and generalization along with semantic memory deficit may play roles on semantic abstract reasoning deficit in PD.

### Abstract

**Background:** Semantic abstract reasoning(SAR) is an important executive domain that is involved in semantic information processing and enables one to make sense of the attributes of objects, facts and concepts in the world. We sought to investigate whether Parkinson's disease subjects(PDs) have difficulty in SAR and to examine the associated pattern of gray matter morphological changes.

**Methods:** Eighty-six PDs and 30 healthy controls were enrolled. PDs were grouped into PD subjects with Similarities preservation(PDSP, n=62) and PD subjects with Similarities impairment(PDSI, n=24) according to their performance on the Similarities subtest of the Wechsler Adult Intelligence

Download English Version:

<https://daneshyari.com/en/article/8841593>

Download Persian Version:

<https://daneshyari.com/article/8841593>

[Daneshyari.com](https://daneshyari.com)