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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

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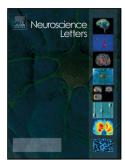
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ACCEPTED MANUSCRIPT

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

Li Wang,^a Kun Nie,^b Xin Zhao,^b Shujun Feng,^b Sifen Xie,^b Xuetao He,^b Guixian Ma,^b Limin Wang,^b Zhiheng Huang,^b Biao Huang,^c Yuhu Zhang,^{b**} Lijuan Wang,^b a*

^aDepartment of Graduate School, Southern Medical University, Guangzhou 510515, Guangdong Province, PR China.

^bDepartment of Neurology, Guangdong Neuroscience Institute, Guangdong General Hospital, Guangdong Academy of Medical Sciences, Guangzhou 510080, Guangdong Province, PR China. ^cDepartment 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: yhzhangsd@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

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