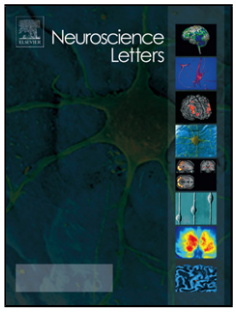

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Characteristics of gray matter morphological change in Parkinson's disease patients with semantic abstract reasoning deficits

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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