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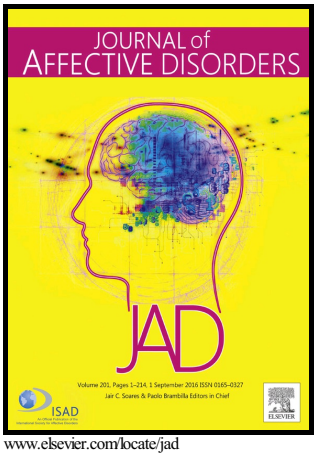

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Insular subdivisions functional connectivity dysfunction within major depressive disorder

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ABSTRACT

Background

Major depressive disorder (MDD) is a mental disorder characterized by cognitive and affective deficits. Previous studies suggested that insula is a crucial node of the salience network for initiating network switching, and dysfunctional connection to this region may be related to the mechanism of MDD. In this study, we systematically investigated and quantified the altered functional connectivity (FC) of the specific insular subdivisions and its relationship to psychopathology of MDD.

Methods

Resting-state FC of insular subdivisions, including bilateral ventral/dorsal anterior insula and posterior insula, were estimated in 19 MDD patients and 19 healthy controls. Abnormal FC was quantified between groups. Additionally, we investigated the relationships between insular connectivity and depressive symptom severity.

Results

MDD patients demonstrated aberrant FC for insular subdivisions to superior temporal sulcus, inferior prefrontal gyrus, amygdala and posterior parietal cortex. Moreover, depression symptoms

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