REGIONAL HOMOGENEITY ABNORMALITIES AFFECTED BY DEPRESSIVE SYMPTOMS IN MIGRAINE PATIENTS WITHOUT AURA

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Target audience

The subjects with migraine without aura (MWoA) and the clinical doctors interested in MWoA.

Purpose

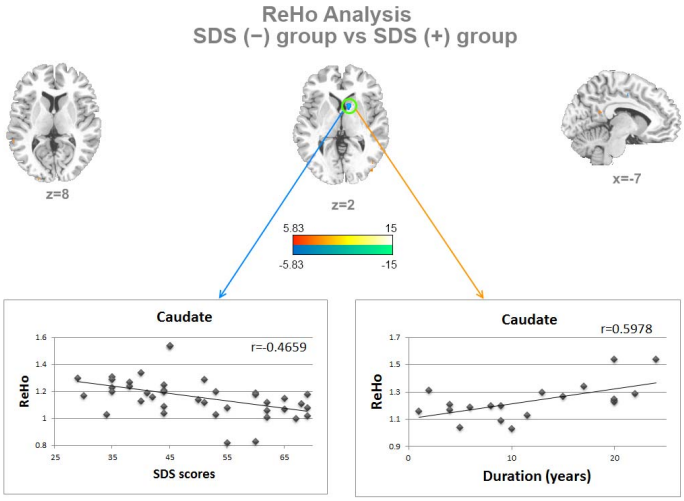
As an primary headache disorder, migraine attacks may even increase the risk of psychiatric disorders with a variety of psychological characteristics such as depressive symptoms (1-3). Previous resting state studies revealed abnormal ReHo in migraine and depressive patients respectively. However, the regional homogeneity (ReHo) abnormalities affected by depressive symptoms in MWoA remains unclear.

Methods

Forty migraine patients without aura (MWoA) were divided into two groups according to their self-rating depression scale (SDS) score, including 20 in the SDS (+) (SDS > 49) group and 20 in SDS (−) (SDS ≤ 49) group. We employed regional homogeneity to analyze the local features of spontaneous brain activity during the resting state between SDS (−) group and SDS (+) group.

Results

The caudate showed decreased ReHo in the SDS (+) group compared with the SDS (−) group. Moreover, the results of correlation analysis demonstrated the average ReHo values of the caudate were significantly negatively correlated with the SDS scores of MWoA and positively correlated with duration of SDS (−) group separately.



Discussion

Similar as the findings in previous resting state studies in depression (4, 5), the caudate showed decreased ReHo in the SDS (+) group compared with the SDS (−) group which might be more related to depression symptoms in patients. As an important part of basal ganglia, the caudate was involved in both pain processing (6, 7) and depression (8). Moreover, the results of correlation analysis demonstrated the average ReHo values of the caudate were significantly negatively correlated with the SDS scores of MWoA and positively correlated with duration of the SDS (−) group separately. It may help to speculated that migraine and depression symptoms may have the opposite effect to ReHo change in the caudate during the resting state.

Conclusion

Our results may have the potential use in diagnosing, monitoring and assessing of a clinical setting in migraine without aura.

Reference

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