

Supplementary materials

Inter-group comparison of decline patterns within the T2DM patients and HCs

Method

To exclude the possible influence of the baseline level on the results of the study, for each ROI, Δr of the mReHO/mCBF ratio were further calculated. Inter-group comparison of decline patterns within the T2DM patients and HCs were performed by using the two samples *t*-tests with Bonferroni correction for multiple comparisons ($P < 0.05$).

Result

A significant difference in Δr of the mReHO/mCBF ratio was found in the ROI of the left insula ($t = 3.363$, $P = 0.001$, Bonferroni corrected) between the T2DM patients and the HCs group. No significant inter-group difference was observed in the other three clusters (Supplementary materials **Table S1**).

Table S1 Between-group comparison of changing rate of mReHo/mCBF ratio in four clusters with significant longitudinal changes in type 2 diabetic patients (Mean \pm SD).

Brain region	Patient	HC	<i>t</i>	<i>P</i>
Left insula	-0.174 \pm 0.149	0.039 \pm 0.338	3.363	0.001*
Left post-central gyrus	-0.158 \pm 0.238	-0.143 \pm 0.261	0.227	0.821
Right rolandic operculum	-0.174 \pm 0.144	-0.056 \pm 0.304	2.052	0.045
Right pre-central gyrus	-0.164 \pm 0.132	-0.067 \pm 0.272	1.857	0.069

Two sample t-test for normally distributed continuous data (means \pm SD).

* Significance after Bonferroni-correction ($p < 0.05/4$).