

Modulation of Functional Connectivity in Response to Mirror Visual Feedback in Stroke Survivors: An MEG Study

Authors: Ruei-Yi Tai, MD, Jun-Ding Zhu, MS, Chih-Chi Chen, MD, Yu-Wei Hsieh, PhD*, Chia-Hsiung Cheng, PhD*

Supplementary material

Supplementary Table S1. Cortical coherence between any 2 brain regions of interest in theta band under 3 experimental conditions

Conditions	M1 _V1	STG _V1	PCC _V1	Precuneus _V1	STG _M1	PCC _M1	Precuneus _M1	PCC _STG	Precuneus _STG	Precuneus _PCC
Bilateral-No mirror										
Median	0.009	0.030	0.021	0.044	0.040	0.046	0.034	0.068	0.035	0.067
IQR	0.011	0.040	0.027	0.038	0.035	0.021	0.045	0.068	0.050	0.042
Bilateral-Mirror										
Median	0.008	0.024	0.023	0.068	0.036	0.053	0.033	0.067	0.039	0.084
IQR	0.009	0.014	0.023	0.057	0.022	0.051	0.035	0.068	0.047	0.052
Unilateral-Mirror										
Median	0.010	0.026	0.038	0.054	0.041	0.055	0.042	0.064	0.037	0.082
IQR	0.011	0.047	0.044	0.039	0.039	0.032	0.037	0.044	0.029	0.057
Adjusted P value										
Bilateral-No mirror										
vs.	0.46	0.15	0.54	0.08†	0.50	0.13	0.49	0.50	0.54	0.11
Bilateral-Mirror										
Bilateral-Mirror										
vs.	0.57	0.62	0.53	0.70	0.48	0.65	0.52	0.47	0.50	0.60
Unilateral-Mirror										

The coherence strength is demonstrated by values of median and IQR. The results of the comparison of cortical coherence between different experimental conditions are demonstrated by adjusted p value. † represents an approached significant difference

IQR: interquartile range, M1: primary motor cortex, PCC: posterior cingulate cortex, STG: superior temporal gyrus, V1: primary visual cortex

Supplementary Table S2. Cortical coherence between any 2 brain regions of interest in the alpha band under 3 experimental conditions

Conditions	M1 _V1	STG _V1	PCC _V1	Precuneus _V1	STG _M1	PCC _M1	Precuneus _M1	PCC _STG	Precuneus _STG	Precuneus _PCC
Bilateral-No mirror										
Median	0.007	0.014	0.025	0.062	0.035	0.052	0.031	0.046	0.020	0.073
IQR	0.011	0.025	0.016	0.051	0.021	0.031	0.053	0.039	0.017	0.043
Bilateral-Mirror										
Median	0.006	0.014	0.016	0.067	0.037	0.053	0.025	0.055	0.019	0.070
IQR	0.009	0.018	0.029	0.042	0.027	0.030	0.033	0.024	0.031	0.045
Unilateral-Mirror										
Median	0.005	0.015	0.027	0.062	0.035	0.059	0.037	0.059	0.021	0.087
IQR	0.014	0.041	0.017	0.063	0.041	0.025	0.034	0.026	0.021	0.027
Adjusted P value										
Bilateral-No mirror										
vs.	0.38	0.50	0.38	0.19	0.43	0.35	0.39	0.23	0.28	0.32
Bilateral-Mirror										
Bilateral-Mirror										
vs.	0.65	0.81	0.45	1.00	0.48	0.57	1.00	0.49	0.95	0.45
Unilateral-Mirror										

The coherence strength is demonstrated by values of median and IQR. The results of the comparison of cortical coherence between different experimental conditions are demonstrated by adjusted p value. There was no significant difference in each comparison.

Supplementary Table S3. Cortical coherence between any 2 brain regions of interest in the beta band under 3 experimental conditions

Conditions	M1 _V1	STG _V1	PCC _V1	Precuneus _V1	STG _M1	PCC _M1	Precuneus _M1	PCC _STG	Precuneus _STG	Precuneus _PCC
Bilateral-No mirror										
Median	0.008	0.023	0.025	0.037	0.024	0.038	0.026	0.041	0.015	0.066
IQR	0.005	0.023	0.030	0.028	0.024	0.013	0.024	0.018	0.014	0.023
Bilateral-Mirror										
Median	0.008	0.015	0.033	0.047	0.020	0.051	0.033	0.041	0.016	0.063
IQR	0.006	0.016	0.016	0.055	0.018	0.030	0.032	0.014	0.011	0.031
Unilateral-Mirror										
Median	0.007	0.019	0.026	0.037	0.030	0.040	0.035	0.042	0.016	0.063
IQR	0.008	0.025	0.017	0.042	0.018	0.016	0.023	0.032	0.016	0.034
Adjusted P value										
Bilateral-No mirror										
vs.	0.49	0.24	0.41	0.35	0.43	0.04*	0.43	0.57	0.40	0.35
Bilateral-Mirror										
Bilateral-Mirror										
vs.	0.45	0.43	0.38	0.48	0.19	0.10	0.42	0.47	0.45	0.33
Unilateral-Mirror										

The coherence strength is demonstrated by values of median and IQR. The results of the comparison of cortical coherence between different experimental conditions are demonstrated by adjusted p value. * represents a significant difference (adjusted $p < 0.05$)

Supplementary Table S4. Cortical coherence between any 2 brain regions of interest in the gamma band under 3 experimental conditions

Conditions	M1 _V1	STG _V1	PCC _V1	Precuneus _V1	STG _M1	PCC _M1	Precuneus _M1	PCC _STG	Precuneus _STG	Precuneus _PCC
Bilateral-No mirror										
Median	0.010	0.016	0.035	0.045	0.033	0.042	0.027	0.058	0.022	0.080
IQR	0.007	0.014	0.021	0.026	0.028	0.021	0.008	0.033	0.023	0.050
Bilateral-Mirror										
Median	0.008	0.016	0.037	0.049	0.018	0.043	0.023	0.048	0.025	0.079
IQR	0.005	0.015	0.025	0.042	0.024	0.035	0.021	0.037	0.018	0.039
Unilateral-Mirror										
Median	0.008	0.015	0.032	0.046	0.017	0.044	0.025	0.037	0.016	0.078
IQR	0.004	0.015	0.013	0.049	0.027	0.018	0.028	0.033	0.011	0.043
Adjusted P value										
Bilateral-No mirror										
vs.	0.49	0.55	0.48	0.52	0.95	0.71	0.45	0.48	0.57	0.60
Bilateral-Mirror										
Bilateral-Mirror										
vs.	0.46	0.50	0.45	0.48	0.43	0.71	0.61	0.76	1.00	0.91
Unilateral-Mirror										

The coherence strength is demonstrated by values of median and IQR. The results of the comparison of cortical coherence between different experimental conditions are demonstrated by adjusted p value. There was no significant difference in each comparison.