Supplementary

Table S1 Brain regions showing increased and decreased nodal properties of functional network in acute mTBI patients compared with healthy controls

Brain region	t value	P value
Increased nodal properties		
Nodal degree		
Frontal_Inf_Orb_L	3.4910	<0.001
Frontal_Mid_Orb_R	2.0232	0.04
ParaHippocampal_R	2.1899	0.03
Heschl_L	2.0559	0.04
Nodal efficiency		
Frontal_Sup_Orb_R	2.0726	0.04
Frontal_Inf_Orb_L	3.3794	<0.001
Frontal_Mid_Orb_R	2.0716	0.04
Heschl_L	1.9920	0.04
Nodal local efficiency		
Frontal_Inf_Tri_R	2.3630	0.01
Amygdala_L	2.8748	0.004
Angular_R	2.4615	0.01
Temporal_Pole_Sup_R	2.2469	0.02
Temporal_Pole_Mid_L	2.3394	0.02
Temporal_Pole_Mid_R	3.8232	<0.001
Decreased nodal properties		
Nodal degree		
Fusiform_L	–2.5671	0.01
SupraMarginal_L	–2.7595	0.006
Cerebellum_Superior_R	–2.1193	0.03
Vermis7	–2.1859	0.03
Nodal efficiency		
Fusiform_L	–2.6484	0.009
SupraMarginal_L	–2.6768	0.008
Vermis 7	–2.0148	0.04
Nodal local efficiency		
Frontal_Sup_L	–2.2212	0.02
Frontal_Sup_R	–1.9848	0.04
Lingual_R	–2.0078	0.04
Occipital_Inf_R	–2.1218	0.03
Cerebellum_Superior_R	–2.3575	0.01

The P values are obtained by using the Bonferroni corrections. R, right; L, left; Frontal_Inf_Orb, Inferior frontal gyrus, orbital part; Frontal_Mid_Orb, Middle frontal gyrus, orbital part; Frontal_Sup_Orb, Superior frontal gyrus, orbital part; Frontal_Inf_Tri, Inferior frontal gyrus, triangular part; Temporal_Pole_Sup, Temporal pole: superior temporal gyrus; Temporal_Pole_Mid, Temporal pole: middle temporal gyrus; Frontal_Sup, Superior frontal gyrus, dorsolateral; Occipital_Inf, Inferior occipital gyrus.

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Table S2 Brain regions showing increased and decreased nodal properties of structural network in acute mTBI patients compared with healthy controls

Brain region	t value	P value
Increased nodal properties		
Nodal degree		
Temporal_Pole_Sup_R	2.0557	0.04
Nodal betweenness		
Frontal_Inf_Oper_R	2.7623	0.006
Supp_Motor_Area_R	2.0269	0.04
Nodal clustering coefficient		
Angular_L	2.1706	0.03
Angular_R	2.2151	0.02
Cerebellum_Superior_L	2.0023	0.04
Nodal efficiency		
Cerebellum_Inferior_R	3.0034	0.003
Decreased nodal properties		
Nodal degree		
Hippocampus_L	−2.8850	0.004
Vermis 4	−2.0132	0.04
Vermis 6	−2.2443	0.02
Nodal betweenness		
Caudate_L	−2.0073	0.04
Putamen_R	−2.2520	0.02
Nodal clustering coefficient		
Precentral_R	−2.4766	0.01
Temporal_Mid_L	−3.2954	0.001
Nodal efficiency		
Frontal_Inf_Oper_L	2.1760	0.03
Frontal_Inf_Tri_R	2.0446	0.04
Rolandic_Oper_R	2.0402	0.04
Supp_Motor_Area_R	1.9878	0.04
Frontal_Sup_Medial_L	2.5113	0.01
Insula_R	2.71887	0.007
Occipital_Sup_R	2.5686	0.01
Occipital_Mid_L	2.4049	0.01
Angular_L	1.9918	0.04
Putamen_R	2.2121	0.02
Temporal_Pole_Mid_R	2.7392	0.007
Temporal_Inf_R	2.6811	0.008
Cerebellum_Superior_R	2.1098	0.03
Cerebellum_Inferior_R	1.9839	0.0494
Cerebellum_Inferior_R	2.7049	0.007

The P values are obtained by using the Bonferroni corrections. R, right; L, left; Temporal_Pole_Sup, Temporal pole: superior temporal gyrus; Frontal_Inf_Oper, Inferior frontal gyrus, opercular part; Temporal_Mid, Middle temporal gyrus; Frontal_Inf_Tri, Inferior frontal gyrus, triangular part; Rolandic_Oper, Rolandic operculum; Frontal_Sup_Medial, Superior frontal gyrus, medial; Occipital_Sup, Superior occipital gyrus; Occipital_Mid, Middle occipital gyrus; Temporal_Pole_Mid, Temporal pole: middle temporal gyrus; Temporal_Inf, Inferior temporal gyrus.

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Table S3 Correlations between global and nodal properties of functional network and MoCA in mTBI patients

FC properties	MoCA-NIS	MoCA-OIS	MoCA-MIS
Gamma	–	rho=−0.274, P=0.01	–
Nodal degree	–	rho=−0.274, P=0.02(ORBsupmed.R)	–
Nodal efficiency	–	rho=−0.259, P=0.02(ORBsupmed.R)	–
Nodal local efficiency	rho=0.340, P=0.004(LING.R)	rho=−0.317, P=0.007((IFGtriang.R)	rho=−0.311, P=0.008(SFGdor.R)

The P values are obtained by using the Bonferroni corrections. mTBI, mild traumatic brain injury; FC, functional connectivity; MoCA, Montreal Cognitive Assessment; MoCA-NIS, naming index score; MoCA-OIS, orientation index score; MoCA-MIS, memory index score; R, right; ORBsupmed, Superior frontal gyrus, medial orbital; LING, Lingual gyrus; IFGtriang, Inferior frontal gyrus, triangular part; SFGdor, Superior frontal gyrus, dorsolateral.

Table S4 Correlations between global and nodal properties of structural network and MoCA in mTBI patients

SC properties	MoCA score	MoCA-AIS
Gamma	rho=0.267, P=0.02	rho=0.358, P=0.002
Sigma	rho=0.268, P=0.02	rho=0.324, P=0.006
Nodal degree	–	rho=0.287, P=0.01(HIP.L)
Nodal betweenness	–	rho=0.293, P=0.01(OLF.L)
Nodal efficiency	–	rho=0.387, P=0.001(SFGmed.L)

The P values are obtained by using the Bonferroni corrections. mTBI, mild traumatic brain injury; SC, structural connectivity; MoCA, Montreal Cognitive Assessment; MoCA-AtIS, attention index score; L, left; HIP, Hippocampus; OLF, Olfactory cortex; SFGmed, Superior frontal gyrus, medial.

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