

Supplementary material

eTable 1: Association between the choroid plexus volume, age and sex in (A) healthy controls and (B) migraine patients.

(A)

HCs, <i>n</i> = 94	Dependent Variable: Choroid plexus volume			
Parameter	<i>Beta</i>	95% Confidence Interval		<i>p</i> -value
		Lower Bound	Upper Bound	
Age	0.252	-0.245	0.750	0.316
Sex	3.849	-210.607	218.305	0.972
TIV	0.001	0.001	0.002	0<.001

(B)

Migraine patients, <i>n</i> = 47	Dependent variable: Choroid plexus volume			
	<i>Beta</i>	95% Confidence Interval		<i>p</i> -value
		Lower Bound	Upper Bound	
Age	0.055	-0.743	0.854	0.890
Sex	133.545	-163.621	430.711	0.370
TIV	0.001	-5.843E-5	0.001	0.070

Linear models, adjusted for total intracranial volume .

Abbreviations: n = number; TIV = total intracranial volume.

eTable 2: Association between choroid plexus volume (*dependent* variable) and disease group (MS versus NMOSD).

Group: MS/NMOSD (n=278)		Dependent variable: Choroid plexus volume		
	<i>Beta</i>	95% Confidence Interval		<i>P</i> -value
		Lower Bound	Upper Bound	
Age	0.587	0.234	0.941	0.001*
Sex	-157.040	-274.313	-39.767	0.009
Disease duration	-0.058	-0.537	0.422	0.814
Relapse in the year prior to MRI	-53.100	-173.734	67.534	0.387
EDSS	3.857	-23.118	30.831	0.778
Total intracranial volume	0.001	0.001	0.001	<0.001*
Number of T2w lesions	2.947	0.568	5.326	0.015*
Disease group (MS vs. NMOSD)	92.823	55.479	130.167	<0.001*

Linear model, adjusted for clinically meaningful covariates.

The linear model showed a significant positive association between the disease group (MS vs. NMOSD) and the choroid plexus volume independent of the number of T2w lesions.

Abbreviations: EDSS = Expanded disability status scale; MS = multiple sclerosis; NMOSD = Neuromyelitis optica spectrum disorder; T2w = T2 weighted.

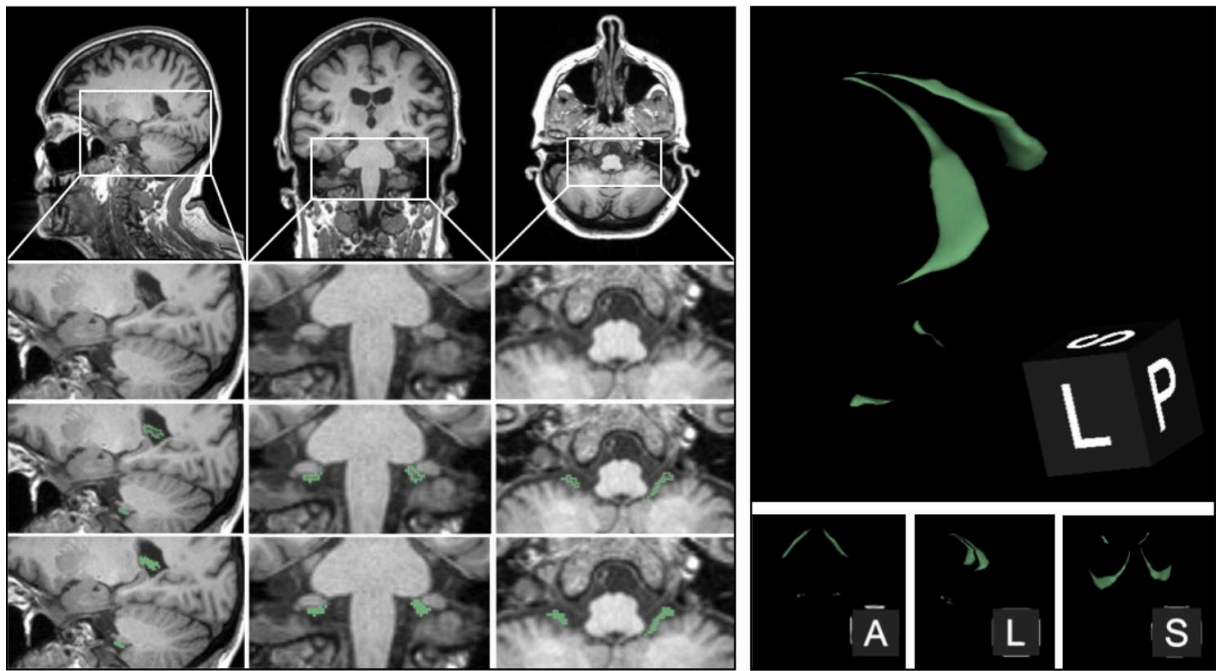
eTable 3: Association between choroid plexus volume (*independent variable*) and disease group (MS vs. NMOSD) as dependent variable in logistic regression model

	Dependent variable: MS vs. NMOSD			
	Exp(B)	95% CI		P-value
		Lower	Upper	
Sex	0.269	0.089	0.819	0.021*
Age	0.993	0.990	0.996	<0.001*
TIV	1.000	1.000	1.000	<0.001*
Disease duration	1.010	1.006	1.014	<0.001*
Relapse within the 12 months prior to MRI	1.365	0.546	3.411	0.505
EDSS	0.777	0.627	0.962	0.020*
T2w lesion number	1.033	1.010	1.057	0.005*
Choroid plexus volume in 100 μL	1.259	1.130	1.404	<0.001*

This logistic regression model was performed to obtain estimates for the association between the choroid plexus volume and the diagnosis of MS in contrast to NMOSD: With every 100 μ L larger choroid plexus, the risk for the diagnosis of MS and not NMOSD increased by 26% [Exp(B) = 1.259] adjusted for the given covariates.

Abbreviations: EDSS = Expanded disability status scale. MS = Multiple sclerosis; NMOSD = Neuromyelitis optica spectrum disorder; TIV = total intracranial volume; T2w = T2 weighted.

eFigure 1: Manual segmentation of the choroid plexus (green) including the infratentorial parts.



Abbreviations: P = posterior; R = right; S = superior.