Supplement

Supplementary Table 1: Gray matter volume (GMV) alterations in cortex and cerebellum of migraineurs.

Region	Cluster size (number of voxel)	Coordinates of the peak voxel(x, y, z)			T-value of the peak voxel
GMV decrease in migraineurs - Cortex					
B Precentral G	4564	-8	-26	68	5.27
L Precentral G	144	-20	-20	58	3.98
R Precentral G	105	20	-20	54	3.71
L Supramarginal G	34	-40	-46	22	3.50
R Postcentral G	42	68	-12	14	3.33
L Angular G	54	-36	-56	20	3.33
GMV decrease in migraineurs – Cerebellum and Brainstem					
n.s.					
GMV increase in migraineurs - Cortex					
R Superior Temporal G	1951	58	-42	14	4.51
R Middle Temporal G	774	56	-28	-8	3.91
R Occipital Pole	471	10	-98	0	3.76
L Pallidum	58	-12	-2	-10	3.50
L Angular G	49	-58	-68	24	3.49
R Middle Temporal G	72	66	-20	-18	3.36
R Inferior Occipital G	21	36	-86	-12	3.30
GMV increase in migraineurs - Cerebellum and Brainstem					
R VIIb, R VIIIa	39	42	-49	-55	4.03
R Crus I, R VI	22	45	-41	-33	3.81
R VIIb	20	42	-62	-58	3.68
R Crus II, R VIIb	40	43	-59	-49	3.44
GMV increase with headache frequency - Cerebellum and Brainstem					
n.s.					
GMV decrease with headache frequency - Cerebellum and Brainstem					
R VI	23	40	-50	-24	3.88
GMV increase with years suffering - Cerebellum and Brainstem					
L Rostral Pons	26	-8	-36	-30	3.62
GMV decrease with years suffering - Cerebellum and Brainstem					
R V	20	15	-50	-11	3.68
L = left, R = right, B = bilateral, n.s. = not significant, G = Gyrus, GMV = Gray Matter Volume					

Supplementary Table 2: Main effect of trigeminal nociception in brainstem and cerebellum.

Region(s)	Cluster size (number of voxel)	Coordinates of the peak voxel(x, y, z)			T-value of the peak voxel
*Cerebellum**: Vermis VIIIa, Vermis Crus I, Left VIIIa, L VIIb, Vermis VIIIb, L V, L I-IV, L VI, Vermis Crus II, L Crus II, Vermis VIIb, L Crus I, Vermis VI, R V, R VI, R VIIIa, R VIIb, R I-IV, L VIIIb, R Crus I *Brainstem*: bilateral PAG, L rostral Pons, Nucleus Cuneiformis, Nucleus Ruber	9129	-12	-74	-35	11.87
Brainstem: L sTN	25	-2	-42	-61	6.85
L = left, R = right, * cerebellar regions with more than 10% of their volume activated					

Supplementary Table 3: Regions with increased BOLD response for migraineurs following trigeminal painful stimulation in the left nostril.

Region	Cluster size (number of voxel)	Coordinates of the peak voxel(x, y, z)			T-value of the peak voxel
R PAG	15	12	-10	-13	3.97
L Crus I	20	-44	-56	-41	3.44
L = left, R = right, PAG = Periaqueductal gray					

Supplementary Table 4: Decreased functional connectivity with left cerebellar area Crus I in migraineurs.

Region	Cluster size (number of voxel)	Coordinates of the peak voxel(x, y, z)			T-value of the peak voxel
Cortical areas					
L Thalamus	60	-22	-30	0	3.95
R Fusiformis G	72	38	-44	-24	3.86
R Occipital Fusiformis G	70	38	-82	-14	3.58
L Occipital Fusiformis G	10	-42	-74	-18	3.37
Brainstem areas					
n.s.					
L = left, R = right, G = Gyrus					

Supplementary Table 5: Regions with activity - following trigeminal painful stimulation in the left nostril - comodulating with the acuteness and/or severity of the migraine.

Region	**Cluster size (number of voxel)**	**Coordinates of the peak voxel(x, y, z)**			**F-value of the peak voxel ($F_{4,46}$)**
ANOVA migraine phase					
Vermis VIIIb, Vermis VIIIa, L VI, L VIIIa, L VIIb, L Crus I, L Crus II, L V*	2600	-18	-58	-29	32.51
R VIIb, R VIIIa R Crus II	91	14	-68	-51	19.53
R VI, R Crus I, R V, Vermis VI, R Crus II	367	30	-54	-33	18.55
L PAG	82	-8	-26	-13	16.47
R PAG	62	8	-20	-5	16.14
R V, R I-V	37	10	-58	-5	15.81
Region	**Cluster size (number of voxel)**	**Coordinates of the peak voxel(x, y, z)**			**T-value of the peak voxel**
post-hoc t-test: inter-ictal<ictal					
n.s.					
post-hoc t-test: inter-ictal>ictal					
R VIIIa	2	24	-68	-51	3.45
R VIIb	4	14	-66	-51	3.44
post-hoc t-test: post-ictal<ictal					
L IX	2	-2	-50	-59	3.34
post-hoc t-test: post-ictal>ictal					
n.s.					
Increase with attack frequency					
L PAG	4	-18	-20	-11	3.81
Decrease with attack frequency					
R PAG	3	20	-18	-11	4.39
R VI	6	22	-72	-17	4.21
R Crus II	2	44	-76	-47	3.82
L = left, R = right, n.s. = not significant, * cerebellar regions with more than 10% of their volume activated					