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Corrigendum to "The effect of electroconvulsive therapy on cerebral monoamine oxidase a expression in treatment-resistant depression investigated using positron emission tomography" [Brain Stimul 12 (3) (2019) 714–723]

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An error occurred during decay correction of the radioactive metabolites of [^{11}C]harmine using high-performance liquid chromatography. Consequently, the quantification of monoamine oxidase A volume of distribution and subsequent statistical analyses were incorrect. We reran the analyses based on the correct data which revealed that the numerical changes resulting from the latest computations have no consequences for the main results or the conclusions of this publication that are subsumed below.

There were no clinically relevant changes in MAO-A V_T following a course of RUL ECT in TRD patients. In the results section, second paragraph, we now state the following: Linear mixed models analysis assessing the effect of ECT on MAO-A V_T in depressed patients revealed a main effect of time ($F = 20.50$, $p < 0.001$), hemisphere ($F = 8.56$, $p = 0.004$) and ROI ($F = 83.53$, $p < 0.001$) and an interaction between hemisphere and ROI ($F = 2.24$, $p = 0.015$). The three-way interaction as well as other two-way interactions were non-significant. Post-hoc comparisons revealed a significant decrease of MAO-A V_T between PET 1 and PET2 (PET1>PET2) and between PET2 and PET3 (PET2>PET3) (both $p < 0.001$, corrected). The estimates of mean MAO-A V_T over all 27 ROIs were 19.92 ± 0.79 (mean ± standard error, SE) at PET1, 19.28 ± 0.78 at PET2 and 18.43 ± 0.79 at PET3. The test-retest variability of mean MAO-A V_T values between PET1 and PET2 was 3.26% (Cohen's $d = 0.81$). Comparably, the effect of ECT on MAO-A V_T was 4.53% (Cohen's $d = 1.08$). Using paired-samples *t*-test, change scores of MAO-A V_T between PET1 and PET2 were compared to change scores of MAO-A V_T between PET2 and PET3, showing no significant difference (left hemisphere $p = 0.68$, right hemisphere $p = 0.80$).

We did not find significant differences in MAO-A V_T between medicated TRD patients at baseline and age- and sex-matched healthy control subjects. In the third paragraph of the results section we now state the following: Comparing MAO-A V_T between healthy controls and patients at baseline (PET1) revealed a significant main effect of ROI ($F = 119.92$, $p < 0.001$) and hemisphere ($F = 18.90$, $p < 0.001$) as well as a significant interaction ROI and hemisphere ($F = 2.46$, $p = 0.004$). Post-hoc separate analyses per hemisphere, however, revealed only numerical differences between groups, indicating slightly lower mean MAO-A V_T in healthy controls compared to MDD patients in the right (17.69 ± 0.90 versus 19.88 ± 0.90, mean ± SE), and left hemisphere (18.07 ± 0.86 versus 19.81 ± 0.86, mean ± SE).

An updated version of Table 2 summarizing mean regional MAO-A V_T in TRD patients at each time point and HC is shown below. Further information about corrections related to the exploratory analyses performed in this study is available on request.

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Table 2
Mean regional MAO-A V_T in treatment-resistant depression (TRD) patients and healthy controls (HC).

Region of interest (AAL)	TRD						HC	
	PET 1		PET 2		PET 3		mean	SE
	mean	SE	mean	SE	mean	SE		
superior frontal gyrus_L	15.82	0.79	15.27	0.81	14.81	0.74	14.52	0.63
superior frontal gyrus_R	16.17	0.84	15.84	0.84	15.21	0.75	14.65	0.69
middle frontal gyrus_L	16.25	0.81	15.82	0.87	15.24	0.71	15.24	0.58
middle frontal gyrus_R	15.94	0.78	15.66	0.80	15.05	0.69	14.51	0.74
inferior frontal gyrus orbital part_L	17.84	0.92	17.14	0.76	16.53	0.62	16.31	0.59
inferior frontal gyrus orbital part_R	18.27	2.15	15.48	0.67	15.55	0.69	15.22	0.67
anterior cingulate and paracingulate gyri_L	21.94	1.18	21.15	1.02	20.31	0.79	19.72	0.95
anterior cingulate and paracingulate gyri_R	20.65	1.13	19.77	0.92	18.97	0.74	18.18	0.96
posterior cingulate cortex_L	18.62	1.07	17.85	0.81	17.13	0.62	16.76	0.74
posterior cingulate cortex_R	16.66	1.00	15.28	0.61	14.74	0.61	14.14	0.68
hippocampus_L	22.81	1.14	21.13	0.90	20.05	0.91	20.00	1.10
hippocampus_R	21.82	1.07	20.60	0.87	19.28	0.81	18.90	1.11
amygdala_L	24.25	1.24	24.26	1.44	22.52	1.12	22.64	1.22
amygdala_R	24.38	1.43	23.19	1.07	22.96	1.46	21.89	1.56
caudate nucleus_L	16.69	1.43	14.80	0.78	15.04	1.40	14.54	0.75
caudate nucleus_R	16.87	0.91	15.51	0.81	16.06	1.56	14.93	0.68
putamen_L	20.02	1.01	19.94	1.03	18.62	0.80	18.60	0.77
putamen_R	20.32	1.05	19.87	0.95	18.63	0.78	18.52	0.77
thalamus_L	23.96	1.18	23.15	1.20	22.10	0.98	22.39	1.03
thalamus_R	24.34	1.25	23.66	1.17	22.38	0.92	22.51	1.02
superior temporal gyrus_L	20.16	0.96	19.53	0.90	18.60	0.73	18.58	0.79
superior temporal gyrus_R	18.34	0.87	17.92	0.85	17.15	0.73	16.82	0.77
middle temporal gyrus_L	19.39	0.99	18.91	0.88	17.95	0.72	17.69	0.71
middle temporal gyrus_R	18.97	0.96	18.42	0.85	17.62	0.71	17.22	0.71
inferior temporal gyrus_L	19.94	1.05	19.22	0.96	18.46	0.80	17.92	0.77
inferior temporal gyrus_R	18.97	0.95	18.51	0.84	17.77	0.75	16.88	0.71
midbrain	26.50	1.67	25.52	1.49	23.61	1.01	23.23	1.29