

Means of conception, parturition and lactation

Statistical approach

For each of the morphometric measures we examined (via two sample T-test analyses) if the monthly rate percentage of change differed in mothers as a function of: 1) type of conception (assisted conception or natural); 2) type of parturition (vaginal delivery or cesarean section); and 3) type of lactation at Post MRI scanning (breastfeeding or formula).

Results

As indicated in the table below, no significant differences were detected for any of the comparisons. Nevertheless, results from these analyses should be taken with caution given the reduced statistical power associated with the small sample size in the natural conception (n=9), cesarean section (n=8) and formula subsamples (n=7).

Supplementary Table. Statistical descriptors and p-values associated to the subsamples comparisons.

Metric Monthly % change	Type of conception			Type of parturition			Type of lactation		
	Natural (n=9)	Assisted (n=16)	p-val.	Vaginal (n=17)	C-section (n=8)	p-val.	Breast (n=18)	Formula (n=7)	p-val.
	Mean (Std)	Mean (Std)		Mean (Std)	Mean (Std)		Mean (Std)	Mean (Std)	
TBV	-0.08 (0.03)*	-0.10 (0.13)*	0.56	-0.10 (0.1)*	-0.07 (0.11)	0.48	-0.09 (0.1)*	-0.11 (0.12)	0.58
CV	-0.14 (0.13)*	-0.21 (0.23)*	0.43	0.22 (0.2)*	-0.1 (0.2)	0.17	-0.16 (0.21)*	-0.24 (0.21)*	0.41
CT	-0.09 (0.13)	-0.13 (0.20)*	0.56	-0.15 (0.19)*	-0.05 (0.16)	0.18	-0.11 (0.2)	-0.13 (0.13)	0.84
SA	-0.05 (0.05)	-0.08 (0.10)*	0.37	-0.08 (0.1)*	-0.06 (0.05)*	0.55	-0.06 (0.06)*	-0.11 (0.13)	0.15
HA	-0.04 (0.02)*	-0.05 (0.04)*	0.47	-0.04 (0.04)*	-0.05 (0.03)*	0.85	-0.04 (0.03)*	-0.07 (0.04)*	0.053
LGI	-0.02 (0.08)	-0.05 (0.07)*	0.28	-0.04 (0.09)	-0.04 (0.04)*	0.98	-0.04 (0.06)*	-0.05 (0.11)	0.58
SCT	-0.07 (0.11)	-0.10 (0.17)	0.68	-0.11 (0.15)*	-0.04 (0.15)	0.22	-0.09 (0.17)	-0.09 (0.11)	0.99
SSA	-0.10 (0.11)	-0.17 (0.18)*	0.30	-0.18 (0.18)*	-0.08 (0.09)	0.16	-0.12 (0.13)*	-0.21 (0.22)	0.22
SD	-0.05 (0.05)*	-0.06 (0.08)*	0.64	-0.07 (0.07)*	-0.04 (0.07)	0.39	-0.06 (0.06)*	-0.07 (0.09)	0.79
SL	-0.02 (0.08)	-0.09 (0.13)*	0.14	-0.1 (0.12)*	-0.003 (0.08)*	0.054	-0.05 (0.12)	-0.12 (0.12)	0.19
SW	0.28 (0.26)*	0.47 (0.71)*	0.48	0.52 (0.64)*	0.15 (0.49)	0.16	0.39 (0.61)*	0.45 (0.66)	0.81
WMT	0.03 (0.29)	0.11 (0.36)	0.57	0.17 (0.35)	-0.09 (0.23)	0.08	0.07 (0.37)	0.12 (0.26)	0.76

Abbreviations: Monthly % change: monthly rate percentage of change; C-section: cesarean section; Std: standard deviation; n: number of subjects; p-val: p-value of the two-sample T-test; TBV: total brain volume; CV: gray matter cortical volume; CT: cortical thickness; SA: surface area; HA: hull area; LGI: local gyrification index; SCT: sulcal CT; SSA: sulcal SA, SD: sulcal depth; SL: sulcal length; SW: sulcal width and WMT: gyral white matter thickness.

* Asterisks indicate the one-sample T-test comparisons that survive the FDR adjusted threshold at $q < 0.05$, which corresponds to an uncorrected p-value of 0.0224, and an absolute t-value ($abs(t)$) of 3.05).