**Supplementary table 4.** Diffusivity indices (mean values with standard deviations in parenthesis) of white matter tracts with significant differences between various headache groups obtained via automated tractography. Only significant comparisons are shown.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **White matter tract** | **Diffusivity index** | **Headache groups compared** | **Cohen’s d** | **P-values** |
|  |  | **Headache free** | **Any headache in HUNT3** |  |  |
| ILF | MD | 0.844 (0.030) | 0.845 (0.032) | 0.03 | 0.038\* |
|  | AD | 1.159 (0.035) | 1.162 (0.037) | 0.08 | 0.013\* |
|  | AD | 1.159 (0.035) | 1.162 (0.037) | 0.08 | 0.042† |
|  |  | **Headache free** | **Migraine in HUNT3** |  |  |
| CST | FA | 0.393 (0.011) | 0.389 (0.013) | 0.33 | 0.047‡ |
|  |  | **Headache free** | **TTH in HUNT3**  |  |  |
| IFOF | MD | 0.826 (0.028) | 0.831 (0.028) | 0.18 | 0.026\* |
|  | AD | 1.126 (0.033) | 1.134 (0.034) | 0.24 | 0.018\* |
|  | RD | 0.676 (0.026) | 0.680 (0.027) | 0.15 | 0.042\* |
| ILF | MD | 0.844 (0.030) | 0.849 (0.033) | 0.16 | 0.019\* |
|  | AD | 1.159 (0.035) | 1.167 (0.037) | 0.22 | 0.010\* |
|  | AD | 1.159 (0.035) | 1.167 (0.037) | 0.22 | 0.035† |
|  | AD | 1.158 (0.035) | 1.167 (0.037) | 0.25 | 0.048‡ |
|  | RD | 0.686 (0.030) | 0.690 (0.033) | 0.13 | 0.037\* |
| CST | AD | 1.151 (0.030) | 1.157 (0.034) | 0.19 | 0.028\* |
|  |  | **Headache free** | **Previous headache** |  |  |
| CST | FA | 0.393 (0.011) | 0.390 (0.012) | 0.26 | 0.044‡ |
|  | FA | 0.393 (0.011) | 0.390 (0.012) | 0.26 | 0.042# |
|  | AD | 1.151 (0.030) | 1.156 (0.031) | 0.16 | 0.049\* |
|  |  | **Headache free** | **New onset headache** |  |  |
| IFOF | MD | 0.826 (0.028) | 0.833 (0.030) | 0.24 | 0.048\* |
|  | AD | 1.126 (0.033) | 1.138 (0.036) | 0.35 | 0.011\* |
|  | AD | 1.126 (0.033) | 1.138 (0.036) | 0.35 | 0.026† |
| ILF | MD | 0.844 (0.030) | 0.853 (0.028) | 0.31 | 0.012\* |
|  | MD | 0.844 (0.030) | 0.853 (0.028) | 0.31 | 0.029† |
|  | AD | 1.159 (0.035) | 1.172 (0.034) | 0.38 | 0.005\* |
|  | AD | 1.159 (0.035) | 1.172 (0.034) | 0.38 | 0.011† |
|  | AD | 1.158 (0.035) | 1.172 (0.034) | 0.41 | 0.040‡ |
|  | RD | 0.686 (0.030) | 0.694 (0.029) | 0.27 | 0.030\* |
| SLF | AD | 1.079 (0.030) | 1.086 (0.036) | 0.21 | 0.041\* |
|  |  | **Headache free** | **Persistent headache** |  |  |
| CING | FA | 0.324 (0.013) | 0.326 (0.012) | 0.16 | 0.032\* |
|  | FA | 0.324 (0.013) | 0.326 (0.012) | 0.16 | 0.023† |
|  | RD | 0.711 (0.031) | 0.701 (0.032) | 0.32 | 0.038† |

AD=axonal diffusion; FA=fractional anisotropy; MD=mean diffusivity; RD=radial diffusivity
MD, AD and RD are given in 10-3 mm2/sec
Between-group differences were investigated with ANCOVA thresholded at *P*<0.05 (two-tailed).

\*Corrected for age and sex
†Corrected for age, sex and WMH
‡ Corrected for age, sex, ICV, HADS, chronic pain and consumption of alcohol and over-the-counter painkillers
# Corrected for age, sex, WMH, ICV, HADS, chronic pain and consumption of alcohol and over-the-counter painkillers