**Supplementary Material**

***Reduced Interhemispheric Coherence in Cerebellar Kainic Acid-Induced Lateralized Dystonia***

Elena Laura Georgescu Margarint1#, Ioana Antoaneta Georgescu1#, Carmen Denise Mihaela Zahiu1, Stefan-Alexandru Tirlea1, Alexandru Răzvan Șteopoaie1, Leon Zăgrean1, Daniela Popa1,2\*, Ana-Maria Zăgrean1\*

1Division of Physiology and Neuroscience, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

2Institut de biologie de l'Ecole normale supérieure (IBENS), Ecole normale supérieure, CNRS, INSERM, PSL Research University, 75005 Paris, France

# These authors contributed equally to this work.

\*These authors jointly directed this work.

**\*Correspondence should be addressed to DP (****dpopa@bio.ens.psl.eu****) or AMZ (****ana-maria.zagrean@umfcd.ro****)**

**Supplementary Tables:**

Table 1. Behavior (AW%). Dystonia score. Statistical data.

|  |
| --- |
| TABLE 1 | Behavior (Figure 2) |
| Active wake %  | Test | P value |
| Pre-kainate vs Post-kainate (all days) (A) | Mann Whitney test | P= 0.0303 |
| Pre-kainate active wake (B) | Kruskall-Wallis test | P = 0.9524 |
| baseline vs. day 1 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 2 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 3 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 4 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 5 | +Dunn's multiple comparisons test | ns |
| Post-kainate active wake | Kruskall-Wallis test | P = 0.6660 |
| baseline vs. day 1 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 2 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 3 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 4 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 5 | +Dunn's multiple comparisons test | ns |
| Active wake vs. Quiet wake comparison | Multiple t-tests | ns |
| Baseline |  | P > 0.9999 |
| day 1 |  | P = 0.4577 |
| day 2 |  | P = 0.2897 |
| day 3 |  | P = 0.8306 |
| day 4 |  | P = 0.3937 |
| day 5 |  | P = 0.3867 |
| Dystonia scores (Figure 2) (C) |  |  |
| Average score per day | Friedman test | P = 0.0455 |
| day 1 vs. day 2 | +Dunn's multiple comparison test | ns |
| day 1 vs. day 3 | +Dunn's multiple comparison test | ns |
| day 1 vs. day 4 | +Dunn's multiple comparison test | ns |
| day 1 vs. day 5 | +Dunn's multiple comparison test | \* |
| Dystonia scores per 30-min (D) |  |  |
|  | Two-way ANOVA | P < 0.0001 |
| 0-30 min vs. 30-60 min | +Tukey's multiple comparisons test | ns |
| 0-30 min vs. 60-90 min | +Tukey's multiple comparisons test | \*\*\*\* |
| 30-60 min vs. 60-90 min | +Tukey's multiple comparisons test | \*\* |
| Control Active wake % |  |  |
| Pre-saline vs Post-saline (all days) (E) | Mann Whitney test | P= 0.9307 |
| Hemidystonia score (G) |  |  |
| Pre-kainate vs Post-kainate (all days)  | Mann Whitney test | P= 0.0079 |

Table 2. Electromyography parameters. Statistical data.

|  |
| --- |
| TABLE 2 | Electromyography (Figure 3) |
|  | Test | P value |
| Mean EMG frequency: |
| Affected side (left) vs. unaffected side (right) EMG pre-kainate (B) |
| Mean frequency pre-kainate (left) | Kruskall-Wallis test | P=0.8669 |
| baseline vs. day 1 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 2 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 3 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 4 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 5 | +Dunn's multiple comparisons test | ns |
| Mean frequency pre-kainate (right) | Kruskall-Wallis test | P=0.1805 |
| baseline vs. day 1 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 2 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 3 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 4 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 5 | +Dunn's multiple comparisons test | ns |
| Affected side (left) vs. unaffected side (right) EMG post-kainate (C) |
| Mean frequency post-kainate (left) | Kruskall-Wallis test | P < 0.0001 |
| baseline vs. day 1 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 2 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 3 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 4 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 5 | +Dunn's multiple comparisons test | ns |
| Mean frequency post-kainate (right) | Kruskall-Wallis test | P= 0.0696 |
| baseline vs. day 1 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 2 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 3 | +Dunn's multiple comparisons test | \*\* |
| baseline vs. day 4 | +Dunn's multiple comparisons test | ns |
| baseline vs. day 5 | +Dunn's multiple comparisons test | ns |
| Average rectified value EMG: |
| Affected side (left) vs. unaffected side (right) ARV EMG post-kainate (D) |
| Affected side (left) | Two-way ANOVA | P < 0.0001 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | \*\* |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Unaffected side (right) | Two-way ANOVA | P < 0.0001 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | \* |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Affected (left) side EMG (E) |
| Pre-kainate | Two-way ANOVA | P = 0.0017 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Post-kainate | Two-way ANOVA | P = 0.0017 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | \* |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Unaffected side (right) EMG (H)  |
| Pre-kainate | Two-way ANOVA | P < 0.0001 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | \*\* |
| baseline vs. day4 | +Dunnett's multiple comparisons test | \*\* |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Post-kainate | Two-way ANOVA | P < 0.0001 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | \* |
| baseline vs. day4 | +Dunnett's multiple comparisons test | \* |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Root mean square EMG: |
| Affected side (left) EMG (F) |  |
| Pre-kainate | Two-way ANOVA | P = 0.7436 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Post-kainate | Two-way ANOVA | P = 0.7436 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Unaffected side (right) EMG (I) |
| Pre-kainate | Two-way ANOVA | P = 0.4784 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Post-kainate | Two-way ANOVA | P = 0.4784 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Affected side (left) vs. unaffected side (right) RMS EMG post-kainate (G) |
| Affected side (left) | Two-way ANOVA | P = 0.2432 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |
| Unaffected side (right) | Two-way ANOVA | P = 0.2432 |
| baseline vs. day1 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day2 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day3 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day4 | +Dunnett's multiple comparisons test | ns |
| baseline vs. day5 | +Dunnett's multiple comparisons test | ns |

Table 3. Left EMG power spectral density bands. Statistical data.

|  |
| --- |
| TABLE 3 | Power spectral density of the left EMG (Figure 4 III) |
| Affected side EMG  | Test | P value |
| Delta pre-kainate (A) | Kruskal-Wallis test | P = 0.0006 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Delta post-kainate | Kruskal-Wallis test | P = 0.0003 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Theta pre-kainate (B) | Kruskal-Wallis test | P = 0.0003 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Theta post-kainate | Kruskal-Wallis test | P = 0.0002 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta pre-kainate (C) | Kruskal-Wallis test | P = 0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Beta post-kainate | Kruskal-Wallis test | P = 0.0008 |
| Baseline vs. day 1 | Dunn's multiple comparisons test | ns |
| Baseline vs. day 2 | Dunn's multiple comparisons test | ns |
| Baseline vs. day 3 | Dunn's multiple comparisons test | \* |
| Baseline vs. day 4 | Dunn's multiple comparisons test | \*\* |
| Baseline vs. day 5 | Dunn's multiple comparisons test | ns |
| Low gamma pre-kainate (D) | Kruskal-Wallis test | P = 0.0003 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Low gamma post-kainate | Kruskal-Wallis test | P = 0.0008 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| High gamma pre-kainate (E) | Kruskal-Wallis test | P = 0.0091 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| High gamma post-kainate | Kruskal-Wallis test | P = 0.0102 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| Delta pre-kainate (A) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.7422 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.9375 |
| Delta post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.2405 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.1434 |
| Theta pre-kainate (B) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.7422 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.5781 |
| Theta post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4908 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.1515 |
| Beta pre-kainate (C) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.6406 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.4688 |
| Beta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.4655 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.3328 |
| Low gamma pre-kainate (D) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4609 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.8125 |
| Low gamma post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.2405 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.684 |
| High gamma pre-kainate (E) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.7422 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P > 0.9999 |
| High gamma post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.5088 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.4389 |
| D3 band EMG affected sidePost-kainate vs. Pre-kainate | Wilcoxon matched-pairs signed rank test | P = 0.0625 |
| D4 band EMG affected sidePost-kainate vs. Pre-kainate | Wilcoxon matched-pairs signed rank test | P = 0.0625 |
| D5 band EMG affected sidePost-kainate vs. Pre-kainate | Wilcoxon matched-pairs signed rank test | P = 0.0625 |

Table 4. Right motor cortex power spectral density bands. Statistical data.

|  |
| --- |
| TABLE 4 | Right motor cortex ECoG power spectral density (Figure 4 I) |
| Affected side  | Test | P value |
| Delta pre-kainate (A) | Kruskal-Wallis test | P = 0.0009 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\*\* |
| Delta post-kainate | Kruskal-Wallis test | P = 0.0024 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Theta pre-kainate (B) | Kruskal-Wallis test | P = 0.4052 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Theta post-kainate | Kruskal-Wallis test | P = 0.0227 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta pre-kainate (C) | Kruskal-Wallis test | P = 0.2660 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta post-kainate | Kruskal-Wallis test | P = 0.0376 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Low gamma pre-kainate (D) | Kruskal-Wallis test | P = 0.0172 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| Low gamma post-kainate | Kruskal-Wallis test | P = 0.3644 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma pre-kainate (E) | Kruskal-Wallis test | P = 0.0068 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| High gamma post-kainate | Kruskal-Wallis test | P = 0.3814 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Delta pre-kainate (A) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.5703 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.0391 |
| Delta post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.0646 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.1688 |
| Theta pre-kainate (B) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4258 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.0781 |
| Theta post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.1688 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.2182 |
| Beta pre-kainate (C) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.6523 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.0391 |
| Beta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.958 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.1073 |
| Low gamma pre-kainate (D) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4258 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.25 |
| Low gamma post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.7898 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.3902 |
| High gamma pre-kainate (E) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.2031 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.3828 |
| High gamma post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.2292 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.8996 |

Table 5. Right motor cortex ECoG-left EMG coherence spectral density bands. Statistical data.

|  |
| --- |
| TABLE 5 | EcoG - EMG coherence (affected side) (Figure 5 I) |
| Right EcoG – left EMG  | Test | FDFn, DFd | P value |
| Delta pre-kainate (A) | Kruskal-Wallis |  | P = 0.6884 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Delta post-kainate | Kruskal-Wallis |  | P = 0.0264 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Theta pre-kainate (B) | Kruskal-Wallis |  | P = 0.3863 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Theta post-kainate | Kruskal-Wallis |  | P = 0.0025 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Beta pre-kainate (C) | Kruskal-Wallis |  | P = 0.8787 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Beta post-kainate | 1-way ANOVA | F (5, 138) = 1.139 | P = 0.3430 |
| Baseline vs. day 1 | +Dunnett's multiple comparisons test |  | ns |
| Baseline vs. day 2 | +Dunnett's multiple comparisons test |  | ns |
| Baseline vs. day 3 | +Dunnett's multiple comparisons test |  | ns |
| Baseline vs. day 4 | +Dunnett's multiple comparisons test |  | ns |
| Baseline vs. day 5 | +Dunnett's multiple comparisons test |  | ns |
| Low gamma pre-kainate (D) | Kruskal-Wallis |  | P = 0.0713 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Low gamma post-kainate | Kruskal-Wallis |  | P = 0.0047 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| High gamma pre-kainate (E) | Kruskal-Wallis |  | P = 0.0209 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \* |
| High gamma post-kainate | Kruskal-Wallis |  | P = 0.0011 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Delta pre-kainate (A) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.6875 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.9102 |
| Delta post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.0003 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.8237 |
| Theta pre-kainate (B) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P > 0.9999 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.4961 |
| Theta post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.0007 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.6102 |
| Beta pre-kainate (C) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.8125 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.2500 |
| Beta post-kainate |  |  |  |
| day 3 vs. day 4 | Mann Whitney test |  | P = 0.6409 |
| day 4 vs. day 5 | Mann Whitney test |  | P = 0.8811 |
| Low gamma pre-kainate (D) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.9375 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P > 0.9999 |
| Low gamma post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.3880 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.5661 |
| High gamma pre-kainate (E) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.6875 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.2031 |
| High gamma post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P = 0.9746 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P = 0.6327 |

Table 6. Right EMG power spectral density bands. Statistical data.

|  |
| --- |
| TABLE 6 | Power spectral density of the right EMG (Figure 4 IV) |
| Unaffected side EMG  | Test | FDFn, DFd | P value |
| Delta pre-kainate (A) | Kruskal-Wallis test |  | P <0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \* |
| Delta post-kainate | Kruskal-Wallis test |  | P <0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Theta pre-kainate (B) | Kruskal-Wallis test |  | P =0.0002 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \* |
| Theta post-kainate | Kruskal-Wallis test |  | P =0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Beta pre-kainate (C) | Kruskal-Wallis test |  | P <0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \* |
| Beta post-kainate | Kruskal-Wallis test | F(5, 153)=5.981 | P <0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Low gamma pre-kainate (D) | Kruskal-Wallis test |  | P <0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \*\* |
| Low gamma post-kainate | Kruskal-Wallis test |  | P =0.0008 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \* |
| High gamma pre-kainate (E) | Kruskal-Wallis test |  | P =0.0041 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | \* |
| High gamma post-kainate | Kruskal-Wallis test |  | P =0.0110 |
| Baseline vs. day 1 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test |  | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test |  | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test |  | ns |
| Delta pre-kainate (A) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.9102 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P >0.9999 |
| Delta post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.4245 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.0542 |
| Theta pre-kainate (B) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.5703 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.5625 |
| Theta post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.5235 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.0634 |
| Beta pre-kainate (C) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.9102 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.8438 |
| Beta post-kainate |  |  |  |
| day 3 vs. day 4 | Mann Whitney test |  | P =0.8571 |
| day 4 vs. day 5 | Mann Whitney test |  | P =0.0904 |
| Low gamma pre-kainate (D) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.9102 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.4375 |
| Low gamma post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.2902 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.8237 |
| High gamma pre-kainate (E) |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.8203 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.5625 |
| High gamma post-kainate |  |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test |  | P =0.7024 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test |  | P =0.9746 |
| D3 band EMG unaffected side | Wilcoxon matched-pairs signed rank test |  | P = 0.0625 |
| D4 band EMG unaffected side | Wilcoxon matched-pairs signed rank test |  | P = 0.0625 |
| D5 band EMG unaffected sidePost-kainate vs. Pre-kainate | Wilcoxon matched-pairs signed rank test |  | P = 0.1875 |

Table 7. Left motor cortex ECoG power spectral density bands. Statistical data.

|  |
| --- |
| TABLE 7 | Left motor cortex ECoG power spectral density (Figure 4 II) |
| Unaffected side  | Test | P value |
| Delta pre-kainate (A) | Kruskal-Wallis test | P = 0.0039 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Delta post-kainate | Kruskal-Wallis test | P = 0.0296 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Theta pre-kainate (B) | Kruskal-Wallis test | P = 0.5680 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Theta post-kainate | Kruskal-Wallis test | P = 0.3001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta pre-kainate (C) | Kruskal-Wallis test | P = 0.2180 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta post-kainate | Kruskal-Wallis test | P = 0.1163 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Low gamma pre-kainate (D) | Kruskal-Wallis test | P = 0.0612 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Low gamma post-kainate | Kruskal-Wallis test | P = 0.7491 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma pre-kainate (E) | Kruskal-Wallis test | P = 0.0294 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma post-kainate | Kruskal-Wallis test | P = 0.2399 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Delta pre-kainate (A) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4961 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.0547 |
| Delta post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4374 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.6893 |
| Theta pre-kainate (B) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.3008 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.25 |
| Theta post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.671 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.3941 |
| Beta pre-kainate (C) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.4258 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.1094 |
| Beta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.6778 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.2852 |
| Low gamma pre-kainate (D) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.3008 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.3125 |
| Low gamma post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.8613 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.7078 |
| High gamma pre-kainate (E) |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.25 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.4609 |
| High gamma post-kainate |  |  |
| day 3 vs. day 4 | Wilcoxon matched-pairs signed rank test | P = 0.6171 |
| day 4 vs. day 5 | Wilcoxon matched-pairs signed rank test | P = 0.8417 |

Table 8. Left motor cortex ECoG-right EMG coherence spectral density bands. Statistical data.

|  |
| --- |
| TABLE 8 | EcoG - EMG coherence (unaffected side) (Figure 5 II) |
| Left ECoG - right EMG  | Test | P value |
| Delta pre-kainate (A) | Kruskal-Wallis test | P = 0.0017 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Delta post-kainate | Kruskal-Wallis test | P < 0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\*\*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Theta pre-kainate (B) | Kruskal-Wallis test | P = 0.0601 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Theta post-kainate | Kruskal-Wallis test | P = 0.0020 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta pre-kainate (C) | Kruskal-Wallis test | P = 0.0729 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Beta post-kainate | Kruskal-Wallis test | P = 0.0019 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Low gamma pre-kainate (D) | Kruskal-Wallis test | P = 0.7468 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Low gamma post-kainate | Kruskal-Wallis test | P = 0.1812 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma pre-kainate (E) | Kruskal-Wallis test | P = 0.9133 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma post-kainate | Kruskal-Wallis test | P = 0.9786 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Delta pre-kainate (A) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.6523 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.3008 |
| Delta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.1009 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.6277 |
| Theta pre-kainate (B) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.0742 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.3008 |
| Theta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.325 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.1167 |
| Beta pre-kainate (C) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.3008 |
| day 4 vs. day 5 | Mann Whitney test | P > 0.9999 |
| Beta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.6621 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.3765 |
| Low gamma pre-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.8203 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.4961 |
| Low gamma post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.9321 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.5303 |
| High gamma pre-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.4961 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.2500 |
| High gamma post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.5940 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.8223 |

Table 9. Left-right primary motor cortices coherence. Statistical data.

|  |
| --- |
| TABLE 9 | Interhemispheric coherence between primary motor cortices (Figure 6) |
| Left – right motor cortices EcoG coherence | Test | P value |
| Delta pre-kainate (A) | Kruskal-Wallis test | P < 0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | \*\*\* |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Delta post-kainate | Kruskal-Wallis test | P = 0.0003 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\*\*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| Theta pre-kainate (B) | Kruskal-Wallis test | P < 0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns  |
| Baseline vs. day 2 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\*\* |
| Theta post-kainate | Kruskal-Wallis test | P = 0.0027 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \*\*\* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\* |
| Beta pre-kainate (C) | Kruskal-Wallis test | P < 0.0001 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | \*\* |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \*\*\* |
| Beta post-kainate | Kruskal-Wallis test | P = 0.0295 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | \* |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | \* |
| Low gamma pre-kainate (D) | Kruskal-Wallis test | P = 0.1347 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Low gamma post-kainate | Kruskal-Wallis test | P = 0.0891 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma pre-kainate (E) | Kruskal-Wallis test | P = 0.7715 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| High gamma post-kainate | Kruskal-Wallis test | P = 0.0014 |
| Baseline vs. day 1 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 2 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 3 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 4 | +Dunn's multiple comparison test | ns |
| Baseline vs. day 5 | +Dunn's multiple comparison test | ns |
| Delta pre-kainate (A) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.5566 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.8203 |
| Delta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.1976 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.4812 |
| Theta pre-kainate (B) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.3750 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.4961 |
| Theta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.2132 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.5793 |
| Beta pre-kainate (C) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.7695 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.5703 |
| Beta post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.7765 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.4652 |
| Low gamma pre-kainate (D) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.7695 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.4258 |
| Low gamma post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.4294 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.5793 |
| High gamma pre-kainate (E) |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.2754 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.9102 |
| High gamma post-kainate |  |  |
| day 3 vs. day 4 | Mann Whitney test | P = 0.0837 |
| day 4 vs. day 5 | Mann Whitney test | P = 0.6239 |