

**Supplementary material 4: analyses using for each patient average values from all recorded seizures**

Descriptive statistics of quantitative EMG measurements

Quantitative EMG parameters	Minimum	Maximum	Mean	Std. Deviation
Tonic-onset duration - deltoid	0.00	81.15	22.94	18.83
Tonic-maintenance duration - deltoid	0.00	56.20	12.30	14.34
Tonic phase duration - deltoid	0.00	38.80	10.64	8.70
Clonic duration – deltoid	0.00	67.30	31.46	21.11
Total seizure duration - deltoid	0.00	107.95	54.40	32.76
Time-windows with ZC above threshold - deltoid	0.00	74.00	30.37	25.60
Tonic maintenance duration – biceps	0.00	36.50	11.99	8.18
Clonic duration – biceps	0.00	73.00	29.75	19.52
Tonic-Clonic duration – biceps	0.00	78.20	41.73	25.71
Average Silent Period – biceps	0.00	312.54	170.57	106.31
Silent Period Slope – biceps	0.00	24.43	9.91	7.35
Average Burst Duration – biceps	0.00	265.04	132.63	78.78
Burst Duration Slope – biceps	- 3.19	0.88	- 0.70	0.94

Independent samples student t-Tests of means for normally distributed qEMG parameters in

PGES duration groups

Quantitative EMG parameters	PGES category	N	Mean	Std. Deviation	Std. Error Mean	t	P
Clonic duration - deltoid	<20s	24	18.37	21.83	4.46	-	<0.001
	≥20s	28	39.79	16.69	3.15	3.92	
Total seizure duration – deltoid	<20s	24	36.71	37.57	7.67	-	0.004
	≥20s	28	64.06	25.01	4.74	3.03	
Zero Crossings above - deltoid	<20s	24	12.96	21.42	4.37	-	<0.001
	≥20s	28	42.48	22.08	4.17	4.88	
Clonic duration - biceps	<20s	24	21.28	24.45	4.99	-	0.006
	≥20s	28	36.01	9.59	1.81	2.96	
Tonic clonic duration - biceps	<20s	24	28.18	30.48	6.22	-	0.001
	≥20s	28	53.34	12.39	2.34	3.79	
Average Burst Duration – biceps	<20s	24	89.11	94.20	19.23	-	<0.001
	≥20s	28	169.93	32.22	6.09	4.01	
Burst Duration Slope – biceps	<20s	24	-0.43	0.87	0.18	1.99	0.052
	≥20s	28	-0.94	0.95	0.18		

Mann-Whitney U-test of means for non-normally distributed qEMG parameters in PGES

duration groups

Quantitative EMG parameters	PGES category	N	Mean Rank	Sum of Ranks	U	P
Tonic onset duration - deltoid	<20s	24	21.65	519.50	237.50	0.031
	≥20s	28	30.66	858.50		
Tonic maintenance duration – deltoid	<20s	24	21.69	520.50	219.50	0.033
	≥20s	28	30.63	857.50		
Tonic total duration – deltoid	<20s	24	22.40	537.50	220.50	0.068
	≥20s	28	30.02	840.50		
Tonic maintenance duration - biceps	<20s	24	18.08	434.00	134.00	<0.001
	≥20s	28	33.71	944.00		
Average Silent Period - biceps	<20s	24	19.92	478.00	178.00	0.004
	≥20s	28	32.14	900.00		
Silent Period Slope – biceps	<20s	24	17.71	425.00	125.00	<0.001
	≥20s	28	34.04	953.00		

**Independent predictors:**

Stepwise multiple regression analysis identified as independent predictors for PGES duration: clonic duration – deltoid ( $R^2=0.336$ ,  $p<0.001$ ); tonic maintenance duration – biceps ( $p=0.021$ ) and silent period slope – biceps ( $p=0.043$ ) ( $R^2=0.286$ ,  $p<0.001$ ).

Stepwise multiple regression analysis for PGES over 20 seconds found as independent predictors: ZC above threshold – deltoid ( $R^2=0.336$ ,  $p<0.001$ ); tonic maintenance duration – biceps ( $p=0.004$ ) and silent period slope – biceps ( $p=0.002$ ) ( $R^2=0.443$ ,  $p<0.001$ ).