

Physiologic Predictors of Post-Traumatic Epilepsy Development

	PTE (n=62)		Odds Ratio [95% Confidence Interval]	p-value	C-Statistic
	N (n=51)	Y (n=11)			
Univariate Analysis					
Gender					
Female	18 (35.3%)	2 (18.2%)	0.41 [0.08, 2.09]	0.2821	0.59
Male	33 (64.7%)	9 (81.8%)			
Age in years, median	7.0	12.0	1.03 [0.92, 1.15]	0.6539	0.53
GCS, median [SD]	7.0 [2.9]	5.0 [2.3]	0.80 [0.60, 1.07]	0.1302	0.65
Seizures < 24 hours	8 (15.7%)	1 (9.1%)	1.86 [0.06, 4.80]	0.5784	0.53
Seizures on days 2-7	5 (9.8%)	7 (63.6%)	16.13 [3.46, 74.84]	0.0004	0.77
Sleep spindle asymmetry	6 (11.8%)	7 (63.6%)	13.12 [2.94, 58.52]	0.0007	0.76
Epileptiform discharges	7 (13.7%)	6 (54.5%)	7.52 [1.81, 31.52]	0.0056	0.70
ICP, median [SD], mmHg	9.7 [3.3]	12.9 [5.9]	1.24 [1.03, 1.50]	0.0232	0.73
CPP, median [SD], mmHg	69.1 [7.3]	67.3 [13.7]	0.99 [0.92, 1.06]	0.7386	0.50
ABP, median [SD], mmHg	80.1 [7.2]	82.8 [8.7]	1.05 [0.96, 1.15]	0.2850	0.59
HR, median [SD], bpm	97.7 [21.8]	92.2 [19.6]	0.99 [0.96, 1.02]	0.5508	0.56
HRsd, median	4.1 [1.9]	1.8 [1.4]	0.51 [0.32, 0.83]	0.0061	0.81
BRs, median	5.2 [5.2]	5.5 [3.0]	0.85 [0.70, 1.04]	0.1118	0.68
PRx, median	0.1 [0.2]	0.2 [0.3]	23.22 [1.09, 495.79]	0.0441	0.64
wPRx, median	0.1 [0.2]	0.2 [0.3]	28.95 [1.09, 769.55]	0.0443	0.65
Multivariate Analysis					
Seizures on days 2-7 adjusted for GCS			16.13 [3.26, 79.01]	0.0004	0.77
Sleep spindle asymmetry, adjusted for GCS			11.34 [2.50, 51.47]	0.0017	0.79
Epileptiform discharges, adjusted for GCS			7.52 [1.80, 35.17]	0.0056	0.70
ICP, adjusted for GCS			1.26 [1.04, 1.52]	0.0206	0.78
HRsd, adjusted for GCS			0.53 [0.33, 0.86]	0.0107	0.80
PRx, adjusted for GCS			20.47 [0.99, 424.51]	0.0510	0.75
wPRx, adjusted for GCS			23.71 [0.92, 613.35]	0.0565	0.74

Key: N, no; Y, yes; n, count; SD, standard deviation; mmHg, millimeters in mercury; GCS, Glasgow Coma Scale; ICP, intracranial pressure; CPP, cerebral perfusion pressure; ABP, arterial blood pressure; HR, heart rate; bpm, beats per minute; HRsd, heart rate standard deviation; BRs, baroreflex sensitivity; PRx, pressure-reactivity index; wPRx, wavelet pressure reactivity index. Note: BOLD represents significant risk factors identified. Note that **BOLD** represent findings of statistical significance.