evaluated off-DBS and during stimulation delivered through each electrode contact in a randomised order.

Results ERNA amplitude, beta power and contact proximity to the anatomically ideal stimulation location predicted magnitude of therapeutic response to DBS. However, after exclusion of covariance, ERNA amplitude remained the only significant predictor of DBS response.

Conclusion ERNA is a readily recordable, large amplitude signal that accurately correlates with motor response to DBS. It holds significant potential as a biomarker for guiding electrode implantation, ideal contact selection, automated parameter fitting and delivery of closed-loop DBS.

REFERENCE

004 VESTIBULAR EVENT MONITORING IN THE EMERGENCY DEPARTMENT

1,2Benjamin Nham*, 1Nicole Reid, 1,2Emma Argaet, 1Kendall Bein, 1,2Gabor M Halmai, 1,Miriam S Welgampola. 1Institute of Clinical Neurosciences, Royal Prince Alfred Hospital, Sydney, NSW, Australia; 2Central Clinical School, University of Sydney, Camperdown, NSW, Australia, 1Emergency Medicine, Department of Emergency Medicine, Royal Prince Alfred Hospital, Camperdown, NSW, Australia

10.1136/jnnp-2019-anzan.4

Introduction Acute vertigo is often accompanied by ictal-nystagmus which may assist with diagnosis. We examine the merits of a structured assessment combined with vestibular event-monitoring in the Emergency Department (ED).

Methods We undertook a structured clinical assessment and video-nystagmography in 220 non-consecutive patients presenting to a public-hospital ED with acute vertigo, during a 10-month period. The records of 115 consecutive vertiginous patients who underwent standard-assessment were compared.

Results For the structured assessment group: 54% presented with acute vestibular syndrome (AVS), 24% with episodic spontaneous vertigo (EVS), and 20% with recurrent positional-vertigo (RPV).

For AVS (n=119), most common diagnoses were vestibular neuritis (34%), stroke (34%) and vestibular migraine (13%). Nystagmus slow-phase velocity (SPV) for VN, stroke and VM were 11.5±2.3°/s, 5.6±2.5°/s, 5.4±5.9°/s; Mean ipsilesional video-head impulse gains were 0.51±0.29, 0.89±0.20 and 0.96±0.13. For EVS(n=53), diagnoses included vestibular migraine which may assist with diagnosis. We examine the merits of a structured assessment combined with vestibular event-monitoring in the Emergency Department (ED).

Conclusion Vestibular event-monitoring and structured clinical assessment secured a diagnosis in 96% of cases compared with 34% for the control group, reinforcing its merit.