CASE STUDY: Improving Patient Management and Quality Care Through Intraoperative Monitoring
Courtesy of R. O’Brien MD, FRCP, MBA
Reference February 12, 2007

HISTORY
23-year old female. Patient presents with severe muscular dystrophy.

MONITORING
Surgeon requested upper and lower SSEPs and TCeMEPs for the case. SSEP responses were obtained by stimulation of the median nerve at the wrists, and posterior tibial nerve at the ankles. Baseline SSEP responses showed good morphology with amplitude and latency values within normal limits.

CHANGES
Changes in SSEP/TCeMEP responses occurred when the head was repositioned after decompression. The surgeon was informed and readjusted the head. SSEP and TCeMEP responses returned to baseline. The decompression was completed and the patient was closed. SSEP and TCeMEP responses were performed during halo placement. Changes in TCeMEP responses also occurred during halo placement. The patient’s head was readjusted and TCeMEP responses returned to baseline. A wake-up test was performed and the patient moved all extremities.

OUTCOME
No new neurological deficit.

LIKELY OUTCOME WITHOUT MONITORING
The changes in positioning reflect underlying compression or ischemic effect with positioning. Left uncorrected, this would likely have resulted in a myelopathy.

REFERENCES:
