Muhammad Akbar Malik et al., J Neurol Neurophysiol 2017, 8:3 (Suppl)
http://dx.doi.org/10.4172/2155-9562-C1-049

Emergent electroencephalogram patterns in encephalopathy among systemic cancer patients admitted in neurointensive care units

Muhammad Akbar Malik and **Imran Mushtaq**
The Brain Associates Institute, Pakistan

Background & Purpose: Evaluating medical coma in systemic cancer patients is inherently complex, neurologic consultation supported with the standard emergent bed-side electroencephalogram (EEG) can be useful. Recommendations for EEG monitoring in the Neurointensive Care Units (NCUs) are lacking. We sought to determine, usefulness of emergent standard bedside EEG features among cancer patients with unexplained coma (GCS≤8).

Materials & Methods: We conducted a prospective EEG assessment of 200 systemic cancer patients consecutively diagnosed and admitted in neurointensive care units (NCUs) of the tertiary care cancer hospitals with unexplained acute impaired consciousness (GCS≤08). Bed-side EEG recordings were done according to the clinical scenario and the requirements of the treating neurologist/intensivist. Patients with brain tumor, brain metastasis, seizures or those with known cause of coma were excluded. Data surrounding clinical, electrographic and treatment factors were collected via a prospective systematic review of medical records and electronic EEGs for correlation with diagnosis, change in the diagnosis and management.

Results: Over a period of two years (from January 2014 to December 2016), a total of 200 systemic cancer patients with an average age of 36 years with acute deterioration of conscious level (GCS≤08) were identified. Of the total, males were 120 (60%), and overall 40 (20%) of these patients were of ≤16 years. At least one bed-side EEG of ≥30 minutes was monitored on each of these patients, which was abnormal in 100% of the records. The main reasons for EEG requests were: 1) Unexplained impaired consciousness/not gaining consciousness 130 (65%) and, 2) One plus convulsions 70 (35%). The EEG records were abnormal in 100% of these comatose patients. The EEG findings in clinical category 1 were: i) Encephalopathy 90 (69.2%), among these 90 patients 26 (23%) patients had encephalopathy with epileptiform discharges, ii) Continuous spike-wave discharges (NCSE) 14 (10.8%), iii) Burst-suppression pattern 12 (9.3%), iv) Electrocerebral inactivity pattern 8 (6.2%), v) Theta coma 4 (3%) vii) alpha coma 2 (1.5). The EEG findings in clinical category 2 were: i) Encephalopathy 54 (77%), among these 54 patients 17 (24%) patients had encephalopathy with epileptiform discharges, ii) Continuous spike-wave discharges (NCSE) 6 (8.6%), iii) Burst-suppression pattern 6 (8.6%), iv) No electrocerebral inactivity pattern, v) Theta coma 2 (2.9%) and vi) Alpha coma 2 (2.9%).

Conclusion: Bed-side EEG record of ≥30 minutes is useful in general cancer patients admitted in NCU with acutely impaired consciousness with or without abnormal body movements. Neurology consultation and EEG studies in these comatose patients provide useful diagnostic and therapeutic information.

Biography

Muhammad Akbar Malik was trained in General Pediatrics in Pakistan and then was trained in Frenchay Hospital Bristal, UK. He established Pediatric Neurology department and worked for five years in Lahore Children Hospital.

docmalikpk2000@yahoo.co.in

Notes: