ASSESSMENT OF SLEEP PATTERNS AMONG PATIENTS WITH SEVERE TRAUMATIC BRAIN INJURY

Background

- Sleep disturbance among patients with traumatic brain injury (TBI) in the acute stage may initiate or exacerbate a variety of co-morbidities and negatively impact rehabilitation.

- Assessment of sleep/wake pattern is needed to improve patient care.

- TheGolden standard in sleep assessment is polysomnography (PSG). This method is not always convenient in clinical practice and consistency is lacking when using PSG in TBI patients.

- A Multisensory Sense Wear Armband (MSWA) has been suggested as an alternative to PSG.

Aim

To investigate the validity and reliability in assessing sleep/wake patterns using MSWA in patients with acute severe traumatic brain injury in a neurointensive care unit.

Method

- A pilot study including 10 consecutive patients aged 18 years or older with severe TBI or Acquired brain injury regardless of etiology (TBI: Glasgow Coma Scale score< 9 at injury).

- Total Sleep Time (TST), Intermittent Awakenings (IA), and Sleep Efficacy (SE) are assessed by MSWA, electroencephalogram (EEG), and video observations in 24 to 48 hours for each patient. Comparative analysis of EEG, MSWA and video recordings will be performed.

Results

- The study is in progress and inclusion has been expanded to include TBI and acquired severe brain injury regardless of etiology. Assessment is challenged by sedation interfering with natural sleep.

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