



Prognostication of outcome using coherence analysis of cerebral oxygenation in patients with sepsis associated encephalopathy

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Abstract:

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Sepsis-associated encephalopathy (SAE) is a multifactorial syndrome, characterized as diffuse brain dysfunction that occurs secondary to infection in the body without overt central nervous system infection. The prognosis for SAE is associated with the degree of cerebral damage. We investigated the relationship between the wavelet coherence of cerebral oxyhemoglobin (OxyHb) among different channels and outcomes in patients with SAE. 14 consecutive patients with SAE were included. Moreover, we included normal controls (n=26) for comparison. The cerebral OxyHb data were collected using functional near-infrared spectroscopy (NIRSIT, OBELAB Inc.). The coherence between sections of prefrontal OxyHb oscillations in five frequency intervals (I, 0.6–2 Hz; II, 0.15–0.6 Hz; III, 0.05–0.15 Hz; IV, 0.02–0.05 Hz; and V, 0.0095–0.02 Hz) were analyzed using wavelet coherence. In addition, we analyzed the coherence of electroencephalography (EEG) signal in three frequency intervals (delta, 2–4Hz; theta, 4–7Hz; and alpha, 8–13Hz).



Biography:

Tae Jung Kim has completed her PhD at the age of 39 years from Seoul National University, College of Medicine. She is a doctor and clinical assistant professor in the department of neurology and critical care medicine of Seoul National University Hospital. She has published about 30 papers.

Recent Publications:

1. Tae Jung Kim, International Journal of Molecular Sciences, 2020
2. Tae Jung Kim, Translational Stroke Research, 2020
3. Tae Jung Kim, Biomaterials, 2020
4. Tae Jung Kim, Resuscitation, 2020
5. Tae Jung Kim, Neurocritical Care, 2020

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