P04-T Wavelet-synchrony research of event-related potentials to naturalistic stimuli in patients in vegetative state and mutism—
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The vegetative state and mutism are long-term states of unconsciousness. Nowadays, brain responses to naturalistic stimuli are studied to investigate the cognitive functions preservation. Wavelet-analysis is a method used to assess the brain's bioelectrical activity.

Thereby, nine patients were investigated. Four of them were in a vegetative state (three patients were later noted consciousness recovery) and five patients were in mutism (four patients had consciousness recovery). The control group consisted of ten healthy subjects. Biopotentials' recording was performed using thirty-two electrodes located in the system of 10–20%. Six music-passages were used as stimuli. One fragment was repeated eleven times (each fragment duration was four seconds). Wavelet-synchrony was calculated over all electrode pairs.

In healthy subjects, the maximum values of wavelet-synchrony in resting-state and when listening to stimuli were detected in the fronto-central-parietal areas. Important feature was the presence of inter-hemispheric and diagonal connections. Also it was revealed for patients in a reversible vegetative state. Resting-state values of wavelet-synchrony in patients in a vegetative state were less the norm, and those in patients in mutism were higher the norm. The patients in a chronic vegetative state have an increase in wavelet-synchrony values relative to the resting-state with a tight localization. In the same time local amplification of wavelet-synchrony was noted in a patient in a chronic mutism.

In conclusion, the identified features in the naturalistic stimuli perception can be used as prediction of a possible consciousness recovery in patients in a vegetative state and mutism. The study was supported RFFI 18-013-00967a.

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P05-T The case of a patient with sporadic Creutzfeldt-Jakob disease – Differentiation from status epilepticus—
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Backgroud: The Creutzfeldt-Jakob Disease is the most frequent spongiform encephalopathy caused by prions. Classic triad of clinical symptoms includes dementia, myoclonus and a typical EEG is present in over 70% of the occurrences. EEG investigation, especially with the possibility of a systematic repetitive recordings, is an important diagnostic tool.

Material and methods: The aim of the study was to present the case of 66-year-old woman who was admitted to the Department of Neurology, Medical University of Lublin with stroke suspicion. She suffered from hypertension. According to reports from her family, during the week before admission to the hospital, she began to suffer from an abnormal verbal contact in the form of difficulty in pronouncing words or understanding speech, difficulty in walking and paroxysmal disorders of an involuntary movements of the upper limbs, more expressed in the left upper limb. Neuroimaging study suggested the possibility of vascular brain damage, paroxysmal disorders and the first EEG - status epilepticus of focal seizures with impaired consciousness.

Conclusions: Sudden occurrence of signs of focal brain injury with symptoms that may suggest epileptic seizures, with vascular changes in neuroimaging and physically and mentally efficient, suggests vascular background of disorders in the first place. The lack of clear improvement after treatment and the rapid development of the typical patterns appearing in repeated EEG recordings, led to adoption of suspicion of CJD. This case confirms that repetition EEG recordings is a valuable diagnostic method.

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P06-T The usefulness of monitoring EEG activity in unconscious patients treated in the neurological ICU—
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Background: Patients in critical condition, especially being in a state of impaired consciousness, treated in the neurological intensive medical care units require a detailed assessment of brain activity. Long term monitoring of EEG activity allows the detection of neuronal dysfunction as a consequence of structural or metabolic damage of CNS, even in the absence of abnormalities in the clinical examination.

Material and methods: We present the case of patients treated in the Department of Neurology, Medical Universities in Lublin, whose continuous monitoring of bioelectrical activity of the brain led to improvements in diagnosis and therapy.

Conclusions: The technique of continuous monitoring of EEG activity can significantly improve the clinical assessment and the ability to care for unconscious patients.

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P07-T Presurgical investigation of sexual behaviour of an epileptic patient—
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Introduction: Periventricular nodular heterotopy is frequently associated with drug resistant, mainly temporal lobe epilepsy.

Patients and methods: We report a young female patient with frequent focal seizures with sexual behaviour. MRI revealed right hemispherial multiplex periventricular nodular heterotopy most of them arround amygdala-hippocampus and the occipital horn of the lateral