

## **Examination of electroencephalography parameters within 24 hours after the first seizure attack in patients referred to Ardabil Alavi Hospital during 2023**

### **Abstract**

**Background:** Abnormal EEG is a predictor of seizure relapse. Obtaining data related to the diagnosis and outcome of the first seizure is necessary for improving care for these patients, whereas data for these studies is scarce and is limited to a few Centers.

**Aim:** Examination of electroencephalography parameters within 24 hours after the first seizure attack in patients referred to Ardabil Alavi Hospital during 2023

**Materials and methods:** In this study, all patients with the first seizure attack who referred to Alavi Hospital in Ardabil in 2023 were included in the study by census, the information of these patients including age, sex, etiology of seizure, type of seizure and routine and stimulation modalities with abnormal waves were collected.

**Results:** The number of 91 patients who referred to the center with the first convulsive attack were examined in this study. 47 men and 44 women with an average age of 38 years, 16 patients in the age group of 30-40 years and 13 patients in the age group of over 60 years. According to the type of seizure in patients, in 69 cases it was Generalized type, in 7 cases it was Simplex partial seizure type and in 15 cases it was Complex partial seizure. EEG findings were reported as normal in 50 cases. Slowing waves were reported in 2 cases and epileptic discharge in 39 cases. In patients with abnormal EEG, in 34 patients these waves were found in routine modality, in 4 cases in HV modality and in 3 other cases in Ph.S modality.

**Conclusion:** In the present study, there was a significant correlation between EEG findings with the etiology and type of seizure, so that in idiopathic cases, the most EEG findings were normal, and in cases of Tramadol use, the most findings were abnormal epileptic waves. Also, in Focal type seizures, the most abnormal findings are related to epileptic waves (complex type).

In the present study, no correlation was found between EEG findings with demographic variables and excitatory abnormalities with demographic variables, etiology and seizure type.

**Key words:** Electroencephalography- Seizures- Excitatory modalities- Seizure etiology