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Letter to the Editor

Clinical Evaluation of 38 Patients with Juvenile Myoclonic Epilepsy

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Dear Editor-in-Chief

Juvenile myoclonic epilepsy (JME) is one of the most common age-related idiopathic generalized epilepsies and includes about 5%-10% of all kinds of epilepsy (1). It presents as a combination of myoclonic jerks (in all cases), generalized tonic-clonic seizures (GTCS) (in more than 80-97% of the cases), absence seizures (2) and its inheritance is a complicated process. Epileptic seizures typically commence during adolescence and puberty (12-18 years) (1).

The present study examines different clinical variables of JME patients. This study was performed retrospectively and based on the data recorded in profiles of patients referred to the Neurology Clinic of Sina Hospital, Tehran, Iran. The variables included age, sex, JME family history, anti-epileptic drugs and the first symptom of seizure. Details of electroencephalography (EEG), imaging and clinical examinations were also recorded. Among the patients referred with seizure complaint, 38 including 44.7% (n=17) males and 55.3% (n=21) females were diagnosed with JME. The mean age of JME diagnosis was 14 to 17 years. 89.5% of the JME patients were found with GTCS, 42.1% with absence epileptic seizures and 100% had myoclonus. Family history was present in 44.7% of the patients. The first clinical presentations of the patients were myoclonus (50%), GTCS (36.8%) and absence (7.9%), respectively and 34% of the patients had developed mentioned all three symptoms throughout the course of the disease. The first EEG was normal in 20 (26%) patients. Their clinical examinations and Magnetic resonance imaging (MRI) results were also normal. In 20 (52%) patients, EEG showed diffuse generalized epileptiform discharges and focal spikes were evident in 4 (10%) patients. Moreover, the first EEG of 4 patients could not be accessed. Focal spikes were present through consecutive EEGs taken from 10 (26%) patients. The mean dosage of anti-epileptic drug (sodium valproate) consumption was 800 mg in these patients.

JME is a common type of idiopathic generalized epilepsy. Correct diagnosis and prognosis of the disease are every important in treating the disease. In more than 85% of the patients, drug treatment, particularly, sodium valproate leads to the withdrawal of seizures (2). Neurologic examinations of the patients and their imaging are normal (2).

Myoclonic jerk is a principal component of the disease and has been observed in 100% of the cases (2). Moreover, studies show that most JME cases are accompanied by GTCS. In our study,

GTCS was present in 89.5% of the cases. Similar amounts were observed in larger sample sizes (2). Absence is the rarest type of seizure in JME and the amounts were different in various studies and ranged from 12% to 54% (2) and in our study, the rate of absence was 42.1%. The rate of family history was approximately 65.9% in some studies (2); however, it was 44.7% in our study.

Although generalized poly spike and wave, usually followed by slow wave, is the index view of EEG in these patients, focal spikes were not uncommon (2) and might be observed in approximately 30% of the EEGs (3). In our study, 10% of the patients had focal spikes in their EEGs.

Our study shows that characteristics of JME cases in our country are approximately similar to the other reported cases and genetic disorders of these patients should also probably be similar to the cases reported in literature. As mentioned before, despite the prevalence of this specific type of seizure, it is not usually correctly diagnosed in the beginning (4). Attending to the symptoms of the disease leads to early diagnosis and more effective drug treatment.

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