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Juvenile Myoclonic Epilepsy
Clinical features and prognostic factors in a group of patients

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Objectives

Juvenile Myoclonic Epilepsy (JME) is the most common type of genetic generalized epilepsy (GGE). Even if it is possible to achieve seizure control in up to 85% of cases, many patients relapse after treatment withdrawal. Objective of the present study was to analyze the clinical and electroencephalographic features of a group of patients with JME, in order to assess their long-term follow-up and the presence of prognostic factors.

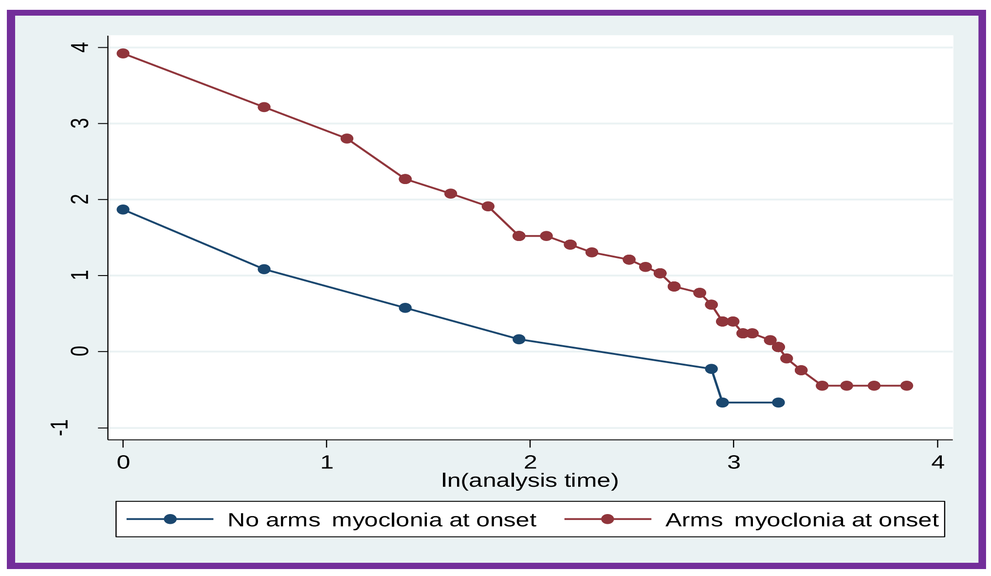
Materials and methods

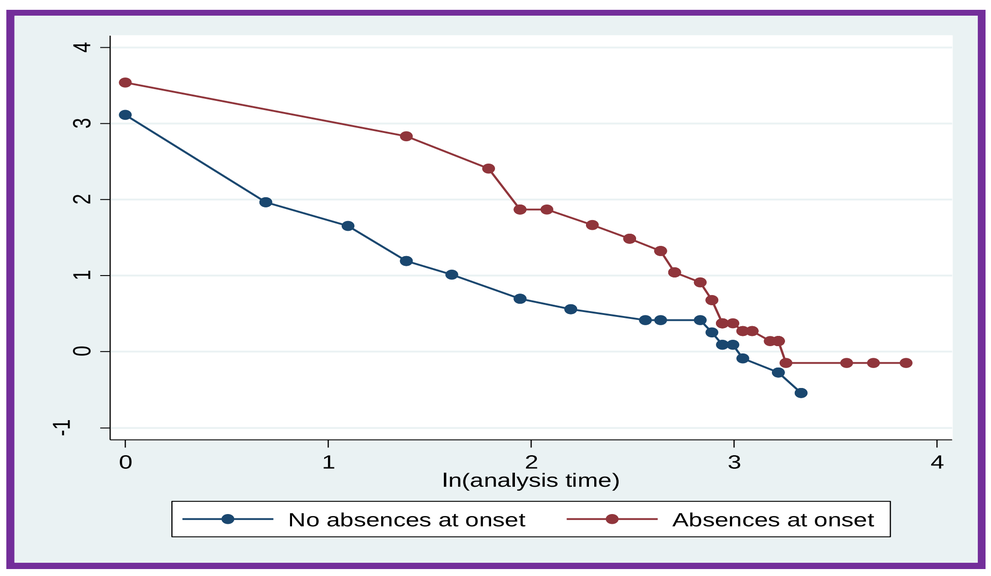
Patients with diagnosis of JME affering to the Epilepsy Centre of the Neurological Clinic of Catania, with at least 5 years of follow-up were enrolled. Their data were retrospectively reconstructed by reviewing medical and EEG records. The endpoint of our study was defined as the achievement of the condition of "seizure-freedom", defined as the absence of any type of seizure for at least two years.

Results

Data from 58 patients were analyzed (22 males [37.9%]; mean age 35.6 ± 8.6). The mean age of seizures onset was 14.7 ± 4.0 years. The mean follow-up time was 14.1 ± 5.7 years. The mean disease duration was 19.7 ± 8.5 years.
36 patients (62.1%) were seizure-free at the last follow up. Lower age at onset (p = 0.03), higher age when starting adequate treatment (p = 0.04), absences (p = 0.003) and arms myoclonia (p = 0.003) at onset were found to be negative prognostic factors, while occurrence of seizures at awakening (p = 0.04) was associated with a better prognosis.

		Multivariate analysis	
Variable	**Haz.Ratio**	**95% Conf. Interval**	**p value**
Sex	0.86	0.32 - 2.34	0.77
Age at onset	1.18	1.02 - 1.38	**0.03***
Family history	1.52	0.56 - 4.11	0.40
Febrile seizures	2.76	0.75 - 10.20	0.12
Cognitive deficit	0.64	0.15 – 2.70	0.54
Age when starting adequate treatment	0.90	0.82 - 0.99	**0.04***
GTCS at onset	0.65	0.20 - 2.09	0.47
Arms myoclonia at onset	0.08	0.02 - 0.42	**0.003***
Limbs myoclonia at onset	0.28	0.05 – 1.34	0.11
Absences at onset	0.26	0.10 - 0.63	0.003*
Seizure frequency at onset	0.61	0.33 - 1.16	0.13
Clinical photosensitivity	2.25	0.74 – 6.82	0.15
Clinical eye-closure sensitivity	0.41	0.08 – 1.86	0.24
Seizures on wakefulness at onset	1.41	0.35 – 5.64	0.62
Seizures on awakening at onset	3.60	1.06 – 12.13	**0.04***
Seizures on sleep at onset	0.42	0.06 - 2.92	0.38





Conclusions

The results of our study revealed that an early seizures onset and the delay in diagnosis represent negative prognostic factors in JME. Moreover, prominent arms myoclonia at onset and an atypical phenotype with early absences seem to be related with a worse outcome.

References

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