Juvenile Myoclonic Epilepsy (JME)

What is Juvenile Myoclonic Epilepsy?

Juvenile Myoclonic Epilepsy (JME) is an epilepsy syndrome characterised by myoclonic jerks (quick jerks of the arms and upper body, and in younger children the legs may also jerk), generalised tonic clonic seizures (GTCS) and sometimes absence seizures (30%).

Seizures usually begin shortly before or after puberty, or sometimes in early adulthood. They usually occur in the early morning, within a couple of hours of awakening. In many cases the awakening jerks are followed in a few years with tonic clonic seizures. It usually affects otherwise healthy children, with girls more commonly than boys.

The exact cause of Juvenile Myoclonic Epilepsy remains unknown. Although people with JME usually require lifelong treatment with antiepileptic medications, their overall prognosis is generally good. The intellectual functions of persons with JME are the same as those in the general population. Some people with JME however, may experience executive functioning difficulties (judgment, decision making)

How common is it?

This is a fairly common type of epilepsy. 5-10% of people with epilepsy have this syndrome.

What are the triggers?

Persons with JME are sometimes photosensitive. Please see EQI’s ‘Photosensitive Epilepsy’ fact sheet. Seizures are often provoked by sleep deprivation, alcohol intake and at the time of menstruation.

Is Juvenile Myoclonic Epilepsy inherited?

This syndrome often has a genetic basis. In some families, genes associated with an increased risk of JME are located on chromosomes 6, 8 or 15. There is about a 15% chance that a child born to a parent with JME will also have JME.

How is Juvenile Myoclonic Epilepsy treated?

In most cases, the seizures are well controlled with medication, but the disorder is lifelong. The management of triggers such as sleep deprivation and alcohol avoidance is very important to help prevent seizures in addition to taking medication reliably.

Valproate is the treatment of choice but may not be suitable for women wishing to fall pregnant.
Other options include lamotrigine, levetiracetam, zonisamide or topiramate. Carbamazepine, oxcarbazepine and phenytoin all have the potential to exacerbate seizures. However, occasional patients can be protected from GTCS but not myoclonus or absence by these medicines.

References:

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