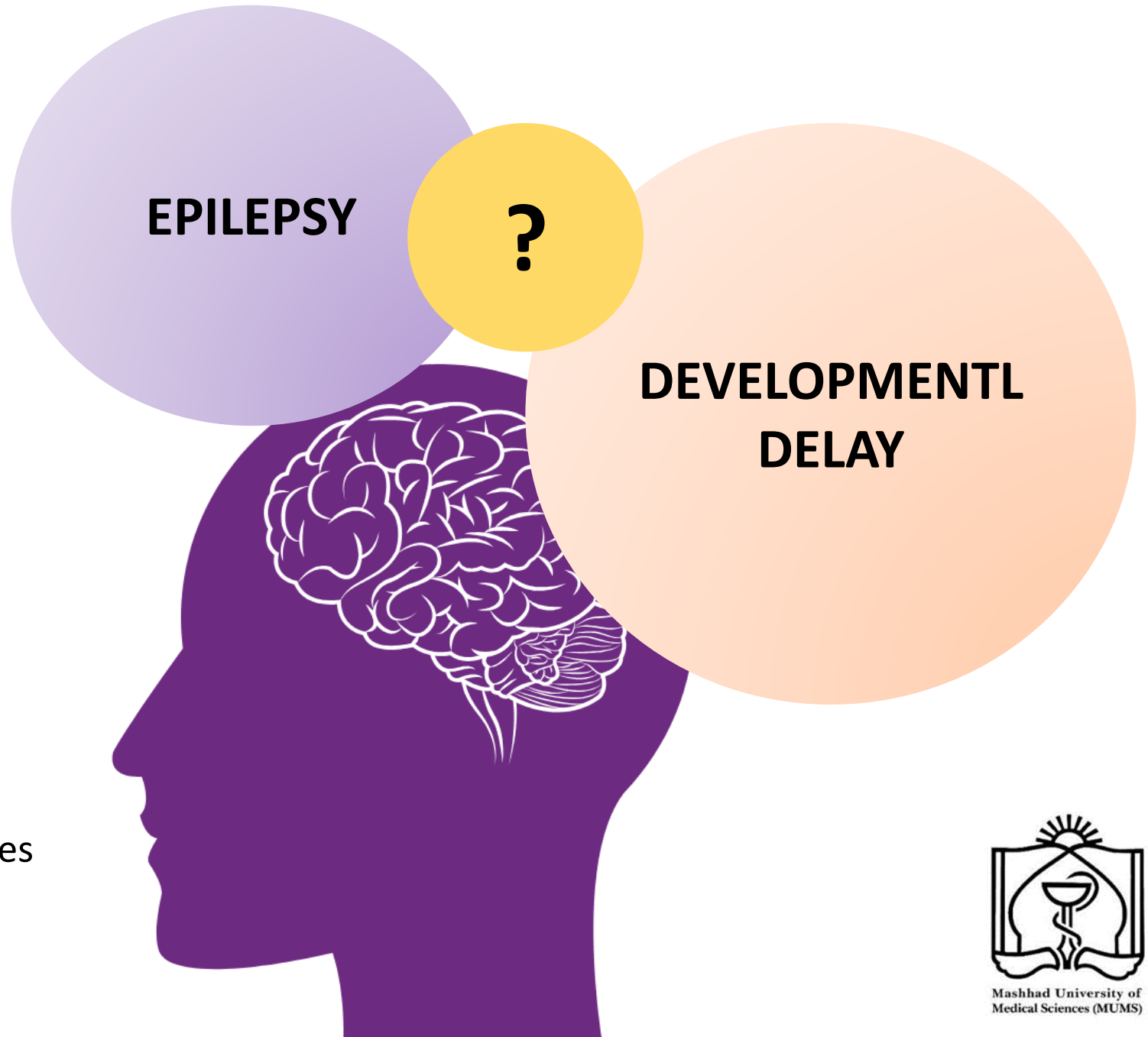


Developmental delay in epilepsy

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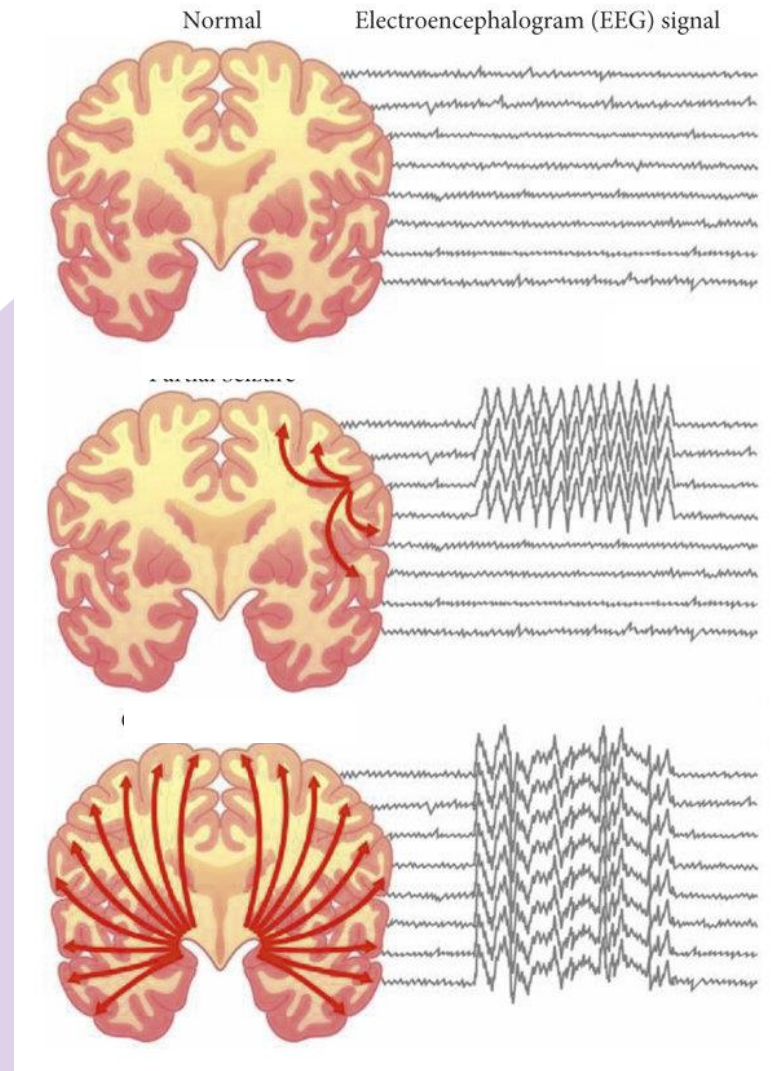
Learning difficulties in epilepsy

- Approximately 30-50 percent of children with epilepsy have some form of learning difficulty. This compares to approximately 15 percent of the general population who have learning difficulties. The types of learning problems associated with epilepsy range from very subtle effects that may go unrecognized but still impact performance, to severe disabilities in several areas of brain function and overall aptitude.



Epilepsy and brain

- When children have seizures, their brains experience abnormal electrical activity. This unusual activity disrupts the connections between neurons.
- The effects on development and learning depend on how often seizure frequency and other factors. In some cases, epilepsy may have little or no impact. In others, it can greatly affect a child's learning potential.



Which seizures can cause developmental delay?

- Seizures that occur frequently and are difficult to control, especially during infancy or early childhood, can potentially lead to developmental delays. Conditions like infantile spasms and certain types of epilepsy can have this effect if not managed effectively.



Case 1

- A 20 months old girl came with seizures and developmental delay. First seizure was focal clonic seizure with fever (12 hours after vaccination) in 4 months old and she had seizures on 6, 8 and 12 months with fever (focal and generalized).
- She had brisk DTRs and language delay (babbling), but normal gross and fine motors.
- The brain MRI and EEG were normal.

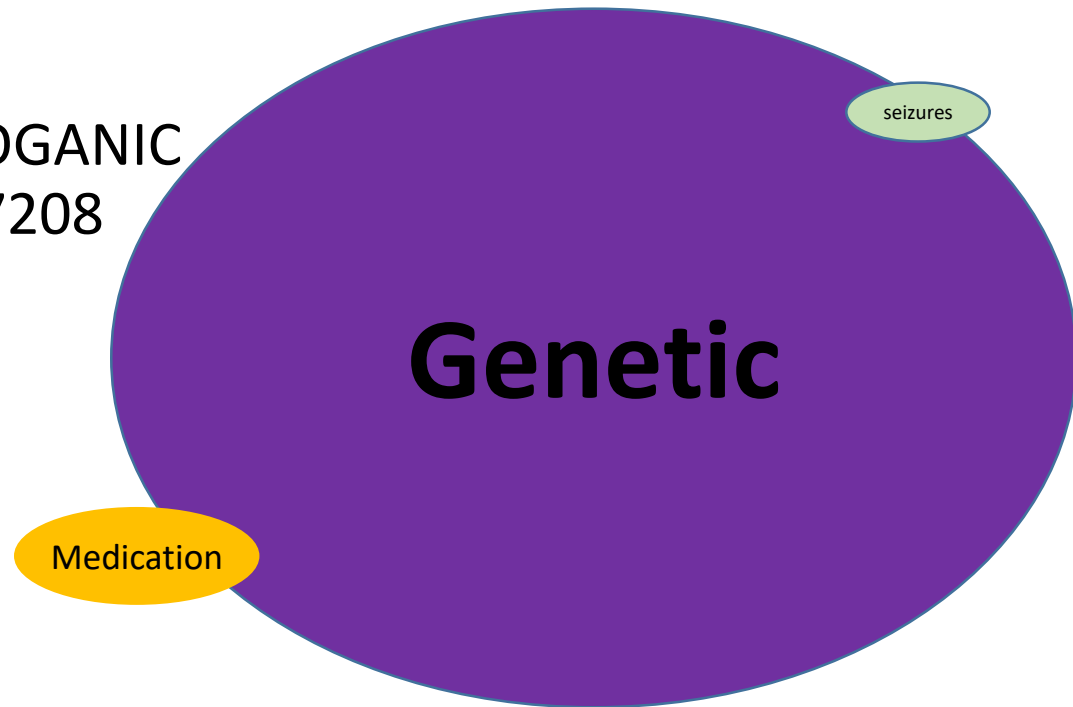
Case 1

- She was on valproate, topiramate, B6 and clobazam.
- After tapering clobazam, she had myoclonic seizures and her social correlations were regressed. She has myoclonus, myoclonic and also tonic seizures.
- Why does she grow developmental delay?
- Seizures?
- Medications?
- Genetic?



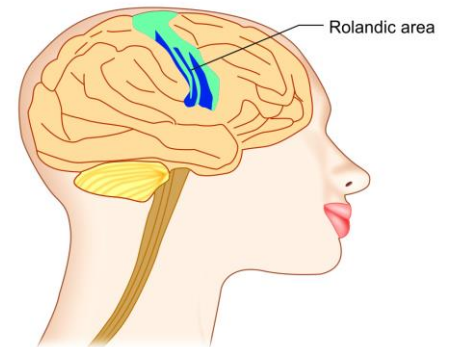
Case 1

- The interictal EEG was still not significantly abnormal.
- The genetic test was:
 - SCN1A NM_001165963.4 c.2792G>A PATHOLOGANIC HETERO AD DRAVET SYNDROME OMIM 607208



Case 2

- A 9 years old boy came with learning disorder from 6 months ago. One year ago, he had seizure at sleep as focal clonic with deviation of lip and drooling. He was aware at event but could not speak. The EEG was abnormal, but brain MRI was normal.



Case 2

- With diagnosis of rolandic seizure (SeLECTs) carbamazepine started and after that he had no seizure but regression in school performances.

Why?



Spike Wave Activation In Sleep (SWAS)

Epileptic encephalopathies:

- Developmental encephalopathy (Down syndrome)
- Epileptic encephalopathies
- Developmental and Epileptic encephalopathies (DEE)

Causes of delay in epilepsy

