

How to diagnose and classify idiopathic (genetic) generalized epilepsies

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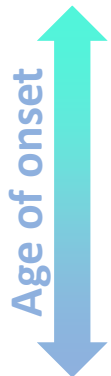
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Idiopathic (Genetic) Generalized Epilepsies

- Electroclinically well-defined group that accounts for almost one third of all people with epilepsy
- Consist of four well-established syndromes and some other rarer phenotypes

younger



Age of onset

childhood absence epilepsy

juvenile absence epilepsy

juvenile myoclonic epilepsy

IGE with generalized tonic clonic seizures alone

older

Seizure types

- Three main seizure types
- Occur either alone or in any combination
 - generalized tonic-clonic seizures
 - typical absences
 - myoclonic seizures

CAE	JAE	JME	GTCS-a
<ul style="list-style-type: none">• TA• ±GTCS	<ul style="list-style-type: none">• TA• ±GTCS• ±MS	<ul style="list-style-type: none">• MS• ±TA• ±GTCS	<ul style="list-style-type: none">• GTCS

Diagnosing IGE

Thorough medical history

- -structured interviews may aid young clinicians
 - Asking too many open-ended questions may distract the patient
 - Asking only yes/no questions may create a suggestion bias
- Specific focus on seizure types, their age at onset, timing and triggers
- Co-existence of multiple seizure types
- Comorbidities and family history should be questioned comprehensively
- Obtain collateral history from witnesses when possible

Neurological and physical examination

- Additional neurological or cognitive signs and symptoms are red flags

EEG is indispensable

Imaging is not essential in typical cases

EEG in IGE

- «Normal» routine EEG is not unexpected
- Methods to increase sensitivity
 - **Sleep deprivation** and **sleep** can enhance generalized spike-wave discharges (GSWD)
 - **Hyperventilation** is the foremost method triggering GSWDs and TA
 - **Photic stimulation** can reveal photosensitivity
 - **Historical triggers** can be tested under controlled and safe conditions
 - Scheduling the **EEG** appointment to **after awakening** may disclose GSWDs and MS which could have been otherwise missed in a JME patient
 - **24-hour EEG or longer telemetry** may allow registration of GSWD when others do not
- Clinicians should be precise about the objective of the EEG and know what they are looking for in order to find it