Saint Alphonsus
A Member of Trinity Health

SEIZURES & EPILEPSY

Initial Diagnosis

- **Seizure is a clinical diagnosis that is based primarily on the HISTORY**

Features of Most Seizures	Features of Syncope	Features of Functional Non-Epileptic Attacks
• Duration 30-120 seconds • Stereotyped semiology (it looks the same every time) • Lateral tongue/cheek biting has high specificity, low sensitivity • Post-ictal encephalopathy and/or combativeness	• Often associated with prodromal features • Body jerks are common, usually <10 seconds • May have brief post-ictal confusion, especially if elderly	• >30% of patients with convulsive events are non-epileptic • Duration often >2 minutes • Irregular (start/stop) convulsions, bicycling of legs, side-to-side head shaking, preserved awareness, eye closure, crying, stuttering • Often remote psychosocial trauma, not necessarily ongoing stress

- **Neuroimaging**
  - MRI brain with and without contrast, seizure protocol
  - Lesion predicts seizure recurrence
- **Routine EEG and sleep-deprived EEG (ordered as NEU16 and NEU8 in Epic)**
  - Poor sensitivity (~10%) for first EEG
  - Epileptiform discharge predicts seizure recurrence
  - Normal EEG does not exclude epilepsy

Management

- **Provoked seizure (alcohol withdrawal, toxic exposure, acute illness): no treatment**
- **First unprovoked seizure (no history of epilepsy): treat only if high risk feature(s)**
  - Abnormal neuroimaging
  - Abnormal EEG
  - Seizure arises from sleep
- **Second unprovoked seizure: start Anti-seizure medication (ASM)**
- **Breakthrough seizure in patient with known epilepsy**
  - Check ASM levels
  - Majority of patients safe to refer back to neurologist if established
  - No need to adjust medications if seizure falls within usual frequency or if there was a clear provoking event (medication non-adherence, infection, etc)

Treatment options

- Levetiracetam (Keppra): start 500 mg BID for smaller individuals, 750mg BID for larger individuals
- Lamotrigine (Lamictal): start 25mg qhs x2 wks, 25mg BID x2 wks, 50mg BID x2 wks, 75mg BID x2 wks, 100mg BID thereafter
  - Best tolerated AED, good for mood, risk of rash (3%)

Safety

- **No driving for at least 3-6 months (or until cleared by neurologist)**
- **If seizure recurs at home, call EMS if duration >5 min or prolonged unresponsiveness**

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