Patient in Seizure:
(PICU, medical/surgical floor)

Total Seizure Time

5 minutes
IV not easily placed
IN midazolam 0.2 mg/kg (max 10mg)*
IN midazolam 0.2 mg/kg (max 10mg)*
successful IV placement
Fosphenytoin 20 PE/kg IV (max 1500mg)
  • In children <2 y/o, febrile status epilepticus, or allergy to fosphenytoin, consider phenobarbital (PHB) 20 mg/kg IV (max 800mg)
  • For children on valproic acid (VPA), consider VPA 20 mg/kg IV
  • All 2nd and 3rd line medications given over 20 minutes

10 minutes
IV in place or easily placed
IV lorazepam 0.1 mg/kg (max 4 mg)*
IV lorazepam 0.1 mg/kg (max 4 mg)*

15 minutes

40 minutes
Phenobarbital 20 mg/kg IV (max 800mg)
  • Or Fosphenytoin if PHB/VPA given at previous step
  • Consider Levetiracetam 20-40 mg/kg IV
  • Contact neurology to assist with initiating video EEG monitoring

60 minutes
Proceed to Refractory Status Epilepticus (RSE) Protocol

*maximum benzodiazepine = 2 doses in one hour (including pre-hospital)
If seizure time unknown or if given 1 pre-hospital dose, give 1 additional dose of benzodiazepine

PCMC Div Neurology April 2013
Refractory Status Epilepticus (RSE): Persistent seizure despite adequate doses of ≥2 anticonvulsants* Please contact neurology at time of initiation

Option 1 - Propofol or Midazolam

- **Propofol** 1-2mg/kg IV, infuse 10mg/min
  Then:
  - Initiate infusion at 25-65mcg/kg/min**
- **Midazolam** 0.5mg/kg slow IV push
  Then:
  - Initiate infusion at 2mcg/kg/min**

Burst suppression achieved?**

- YES (at ≤ max dose)
  - Select alternate AED above
- NO
  - 6 hour assessment:
    Does EEG show seizure during the preceding hour (hour 5-6)?

  - NO
    - Wean AED
    - Discuss prophylactic AEDs with neurology
  - YES
    - If on propofol, consider increase or select alternate AED above
    - Consider burst suppression for 48-72 hours, then wean ***
    - Obtain MRI/MRS, multiple agents, expanded diagnostic eval
    - Discuss adjunct AEDs with neurology

Option 2 - Pentobarbital

- **Pentobarbital** 5-10mg/kg IV
  Then:
  - Initiate infusion at 0.2-0.4mg/kg/min**

Burst suppression achieved?**

- NO (at ≤ max dose)
  - Discuss adjunct AEDs with neurology
- YES
  - 24 hour assessment:
    Does EEG show seizure during the preceding hour?

  - YES
    - Burst suppression achieved?**
      - NO (at ≤ max dose)
        - Wean AED***
        - Discuss prophylactic AEDs with neurology
      - YES
        - **Pre-existing epileptic encephalopathy is an exclusion criteria for RSE guideline
        - **Titrate upward to EEG burst suppression as tolerated systemically; goal 1 burst per 10-second screen
        - **Preferable to initiate wean in early AM if possible

  - NO
    - **Pre-existing epileptic encephalopathy is an exclusion criteria for RSE guideline
    - **Titrate upward to EEG burst suppression as tolerated systemically; goal 1 burst per 10-second screen
    - **Preferable to initiate wean in early AM if possible