Proposed Algorithm for Convulsive Status Epilepticus

From "Treatment of Convulsive Status Epilepticus in Children and Adults," Epilepsy Currents 16.1 - Jan/Feb 2016

Time Line

0-5 Minutes Stabilization Phase

5-20 Minutes Initial Therapy Phase

20-40 Minutes Second Therapy Phase

> 40-60 Minutes Third Therapy Phase

Interventions for emergency department, in-patient setting, or prehospital setting with trained paramedics

- 1. Stabilize patient (airway, breathing, circulation, disability neurologic exam)
- 2. Time seizure from its onset, monitor vital signs
- Assess oxygenation, give oxygen via nasal cannula/mask, consider intubation if respiratory assistance needed
- 4. Initiate ECG monitoring
- Collect finger stick blood glucose. If glucose < 60 mg/dl then Adults: 100 mg thiamine IV then 50 ml D50W IV Children ≥ 2 years: 2 ml/kg D25W IV Children < 2 years: 4 ml/kg D12.5W IV
- 6. Attempt IV access and collect electrolytes, hematology, toxicology screen, (if appropriate) anticonvulsant drug levels

YES

Does Seizure Continue?



If patient at baseline,

then symptomatic

If patient at baseline,

then symptomatic

medical care

medical care

A benzodiazepine is the initial therapy of choice (Level A):

Choose one of the following 3 equivalent first line options with dosing and frequency:

- Intramuscular midazolam (10 mg for > 40 kg, 5 mg for 13-40 kg, single dose, Level A) OR
- Intravenous Iorazepam (0.1 mg/kg/dose, max: 4 mg/dose, may repeat dose once, Level A) OR
- Intravenous diazepam (0.15-0.2 mg/kg/dose, max: 10 mg/dose, may repeat dose once, Level A)

If none of the 3 options above are available, choose one of the following:

- · Intravenous phenobarbital (15 mg/kg/dose, single dose, Level A) OR
- Rectal diazepam (0.2-0.5 mg/kg, max: 20 mg/dose, single dose, Level B) OR
- Intranasal midazolam (Level B), buccal midazolam (Level B)

YES

Does Seizure Continue?



There is no evidence based preferred second therapy of choice (Level U):

Choose one of the following second line options and give as a single dose

- Intravenous fosphenytoin (20 mg PE/kg, max: 1500 mg PE/dose, single dose, Level U) OR
- Intravenous valproic acid (40 mg/kg, max: 3000 mg/dose, single dose, Level B) OR
- Intravenous levetiracetam (60 mg/kg, max: 4500 mg/dose, single dose, Level U) If none of the options above are available, choose one of the following (if not given already)
 - Intravenous phenobarbital (15 mg/kg, single dose, Level B)

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There is no clear evidence to guide therapy in this phase (Level U):

Choices include: repeat second line therapy or anesthetic doses of either thiopental, midazolam, pentobarbital, or propofol (all with continuous EEG monitoring)

If patient at baseline, then symptomatic medical care

AMFRICAN

Disclaimer: This clinical algorithm/guideline is designed to assist clinicians by providing an analytic framework for evaluating and treating

Does Seizure

Continue?



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