**Inclusion Criteria**
- Age > 1 month
- Generalized convulsive seizure > 5 minutes
- With or without history of epilepsy
- With or without fever
- Patient presenting with seizure > 5 minutes who received neuromuscular blocking agent
- Any non-convulsive seizure

**Exclusion Criteria**
- Severe traumatic brain injury
- < 1 month of age

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**Initial Onset of Seizure:**
- Obtain AMPLE history
- Assess ABCs
- Give 100% oxygen, suction if needed
- Obtain IV access
- Check glucose, obtain electrolytes

**Phase 1**
- At 5 minutes administer Lorazepam (Ativan) 0.1 mg/kg IV/IM (max 4 mg)
  - OR
  - Intranasal midazolam (<40 kg – 5 mg or >40 kg – 10 mg) (max dose 10 mg)
  - Neurology consult if ED/Inpatient

**Phase 2**
- Seizure continues
- Order medications and continue pathway
- At 10 minutes if seizure continues: repeat lorazepam 0.1 mg/kg IV/IM (max 4 mg)

**Phase 3**
- At 20 minutes (or earlier if patient still seizing after 10 mins of 2nd dose of lorazepam IV) administer levetiracetam (Keppra) 60 mg/kg IV (max 4500 mg)
- Check lab results
- Reassess ABCs
- Consider RSI
- Administer Fosphenytoin 20 mg/kg IV (max 1500 mg)

**Seizure continues**
- Continuous EEG
- Admit to PICU

**Seizure continues**
- Order medications and continue pathway
- Continue to assess ABCs
- Maintain oxygenation

**Seizure STOPS**
- Continue to assess ABCs
- Maintain oxygenation

**Seizure continues**
- Order the following medications after the 2nd dose of lorazepam to have at bedside:
  - Levetiracetam
  - Fosphenytoin

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**Hypoglycemia:**
- 1-2 months: 2.5 mL/kg of D10W
- >2 months: D25W 2-4 mL/kg or D10W 5-10 mL/kg

**Hypomagnesemia:**
- Magnesium sulfate 25-50 mg/kg IV (max 2000 mg/dose)

**Hyponatremia:**
- Consider 3% NS 4-5 mL/kg IV for Na < 120

**Hypocalcemia:**
- Calcium gluconate 50-100 mg/kg IV (max 3000 mg/dose)

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**If patient is cyanotic, bradycardic, or apneic:**
- Start CPR
- Provide BVM, RSI

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**Follow Phases of Care**

- **0-5 minutes**
  - Initial Onset of Seizure
  - Call MET at 5 minutes

- **5-20 minutes**
  -Phase 1
  - If seizure continues
  - Order medications and continue pathway

- **20-40 minutes**
  - Phase 1
  - If seizure continues
  - Order medications and continue pathway

- **40-60 minutes**
  - Phase 1
  - If seizure continues
  - Order medications and continue pathway

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**Refractory Phase → Page 2**
Status Epilepticus Pathway

**Midazolam IV:**
- Give 0.2 mg/kg bolus (maximum 10 mg), then start infusion at 0.2 mg/kg/hr (max 10 mg/hr)
- Increase infusion rate by 0.2 mg/kg/hr (max 10 mg/hr) every 10 minutes until target burst suppression or reach a dose of 1.2 mg/kg/hr
- Perform endotracheal intubation if not already done

Add **Vimpat IV:**
- 10 mg/kg (max 300 mg loading dose)
- Then 5 mg/kg BID (max 600 mg/day)

- **Treatment Target**
  - Complete suppression of seizures
  - EEG burst suppression around 70% (never <50%)
- Maintain burst suppression:
  - Initial 24-48 hours
  - Repeated: 48-72 hours
- Weaning continuous infusions:
  - ≤48 hours duration: wean over 6-12 hours, decrease rate by 15-30% every 2 hours
  - >48 hours duration: slow wean, decrease rate by 15-30% every 6-12 hours
  - Consider adding scheduled benzodiazepines or barbiturates for withdrawal for infusions >5 days
- Add maintenance anti-seizure medications:
  - Use doses at high end of therapeutic range
  - Consider combinations with multiple different mechanisms

**Add Ketamine IV:**
- Start infusion at 0.5 mg/kg/hr
- Increase infusion rate by 0.5 mg/kg/hr every 15-20 minutes until target burst suppression or maximum dose of 7.5 mg/kg/hr
- Prepare to add IV pentobarbital infusion when ketamine infusion reaches 6 mg/kg/hr

**Add Phenobarbital**
- Start 20 mg/kg IV loading dose (max 1500 mg)
- Maintenance 5 mg/kg IV once daily (max 500 mg)

**Pentobarbital IV:**
- Give 5 mg/kg bolus, then start infusion at 1 mg/hg/hr
- Increase infusion rate by 0.5 mg/kg/hr every 15-20 minutes until target burst suppression or max dose of 3 mg/kg/hr
- Decrease midazolam infusion rate to 1 mg/kg/hr at the start of pentobarbital infusion, stop midazolam after first increase of pentobarbital infusion to 1.5 mg/kg/hr

**Add Perampanel:**
- 4 mg PO once daily
- Increase every 2 days by 2 mg (max 12 mg)

**Consider other therapies:**
- Ketogenic diet
- Immunotherapy (corticosteroids, IVIG, plasmapheresis)
- Pyridoxine (if not already tried)
- Epilepsy surgery consultation

**Refractory Phase: > 60 minutes**

- Therapeutic target not achieved

**Therapy target achieved**

- Consider intubation
1. Time from seizure onset to first dose of lorazepam or midazolam administration  
   A. Dose correct?  
2. Time from seizure onset to Keppra administration  
   A. Dose correct?
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References
