

Seizures

History and Physical:

Is this a new onset seizure? How many minutes did the seizure last and how was the seizure described? Has the patient been ill and if so, how long? Any associated fever? Is the patient on medications for a current illness? If the patient has a history of seizures has there been a change in medications? Is there any likelihood of ingestion? If so, do we know what the patient ingested? Was the patient a victim of a trauma? If so, has there been a CT Scan?

Diagnostic Considerations:

Electrolytes including glucose, calcium, magnesium, BUN/Creatinine, complete blood count with differential, blood culture, consider toxicology screen, ammonia level, and anticonvulsant levels for known seizure history.

Lumbar puncture for suspected meningitis/encephalitis.

Non contrast head CT Scan for trauma or suspected structural abnormalities (usually <6 months and not associated with febrile state).

Treatment:

1. Support Airway
 - a. Place patient in a position to maintain an open airway
 - b. Provide 100% oxygen
 - c. Suction as needed
 - d. For central hypoventilation/apnea: Ventilate with bag and mask or intubate
 - i. For intubation, think Pentothal if blood pressure is stable
2. Anticonvulsants
 - a. Goal is to stop seizures while maintaining the airway and hemodynamics
 - b. First Line Therapy without a MD order
 - i. Phenobarbital 20 mg/kg IV
 1. Give 10mg/kg at a time over 5 minutes
 - c. First Line Therapy with a MD order
 - i. Ativan (Lorazepam) 0.05 - 0.1 mg/kg IV
 - ii. Versed (Midazolam) 0.1 mg/kg IV
 - iii. Valium (Diazepam) 0.1 mg/kg IV
 - d. Second Line Therapy with a MD order
 - i. Dilantin (Phenytoin) 20 mg/kg IV
 1. Give over 5-20 minutes in NS only
 2. Do not mix with other drugs
 - ii. Fosphenytoin (Cerebyx) 10-20 mg PE/kg IV
 1. PE = Phenytoin Equivalents
 - e. Watch for side effects of anticonvulsants
 - i. Central Nervous System and Respiratory Depression
 - ii. Apnea
 - iii. Hypotension
3. Identify and Treat Underlying Cause

- a. Fever-antipyretic
 - i. Acetaminophen (Tylenol) 10-15 mg/kg PO/PR
 - ii. Ibuprofen (Advil, Motrin) 5-10 mg/kg PO
- b. Hypoglycemia
 - i. D25W 0.5-1 gm/kg IV
- c. Hyponatremia
 - i. 4-6 cc/kg 3% NaCl
 - 1. Increases serum sodium (Na) by 3-5 mmol/L
- d. Sepsis
 - i. Give antibiotics
 - 1. Ceftriaxone (Rocephin) 50-100 mg/kg IV/IM
 - a. not to exceed 2 gm.
 - 2. In the likelihood of Meningitis
 - a. < 2 month of age...Give both...
 - i. Ampicillin 100 mg/kg IV
 - ii. Cefoxatime (Claforan) 50 mg/kg IV
 - b. > 2 month of age...Think of both...
 - i. Ceftriaxone (Rocephin) 50-100 mg/kg IV/IM, not to exceed 2 gm.
 - ii. Vancomycin 10-15 mg/kg IV