Mock Code – SE-01
Pediatric Emergency Department
Vandertbilt Children's Hospital

A 4 year-old male comes to the emergency department by EMS because of an active seizure. He was fine up until he started to seize. He is actively seizing when EMS arrives to the ED. The patient has been seizing now for 20 minutes. EMS was unable to start an IV. 2 mg of diastat was given enroute. Accucheck per EMS is 120. Additional EMS treatment includes oxygen by 100% NRBM. Mother is enroute.

Allergies: None
Medications: None
Past medical history is negative.
Past surgical history is negative.
No hospitalizations
Last meal: 4 hours ago
Events: Doing fine, acting normal up until the seizure started.

Physical Examination:
Generalized tonic-clonic seizure activity, eyes deviated to the right, lots of oral secretions, course breath sounds, skin cyanotic.

Primary Survey:
Vitals Signs: BP 70/40 mmHg P: 140/min RR: 28/min T: 101.6 R
Airway: open, unprotected, Oxygen saturation 85% while on 100% NRBM
Breathing: breath sounds course but symmetric
Circulation: BP 70/40 mmHg, distal pulses absent, capillary refill 4 seconds
Disability: Actively seizing, moving all extremities

Secondary Survey:
Head: Normal, not trauma, no bony defects
Eyes: deviated to right, pupils 3 mm and equal
Ears: normal
Nose: normal
Throat: copious secretions
Neck: supple
Lungs: breath sounds coarse
Heart: tachycardia, no murmur
Abdomen: soft, no masses
Extremities: normal
Neurological exam: actively seizing

Initial actions:

1. estimate weight of 4 year old: 15-20 kg
2. accucheck
3. recognize status seizures
4. establish IV access
5. apply 100% oxygen
6. cardiac monitor
7. continuous pulse oximetry
8. administer anticonvulsants
    a. lorazepam: 0.05 mg/kg IV
    b. diazepam: 0.2-0.4 mg/kg IV
    c. midazolam: 0.1-0.2 mg/kg IV
    d. fosphenytoin: 20 mg/kg PE
    e. phenobarbitol: 10 mg/kg x2
    f. pyridoxine 100 mg IV if B6 deficiency or INH ingestion (1gm per gm of IHN ingested)

9. At 30 minutes (if not sooner) should intubate because of Status Epilepticus
    a. Know ET tube Size: 4.5 – 5.0
    b. Atropine: .02 mg/kg
    c. Lidocaine: 1 mg/kg
    d. Succinylcholine dose: 1.5 mg/kg
    e. Vecuronium 0.1 mg/kg
10. Need to chemically induce coma to stop seizures
    a. Pentobarbatol: 5-10 mg/kg over 1-2 hours then 1-3 mg/kg/hr infusion
    b. Thiopental
    c. Propofol 2 mg/kg bolus followed by drip at 4-12 mg/kg/hr
    d. Midazolam 0.2 mg/kg bolus followed by infusion of 0.05 to 0.5 mg/kg/hr

Etiology of Status Seizures
CNS infection
Trauma
Hypoglycemia
Hyponatremia
Hypocalcemia
Hypoxia
Intracranial mass
Intracranial bleed
Ingestion: lindane, INH
Eclampsia

Evaluation:
Head CT
CBC with differential / platelets
CMP
Magnesium
Calcium
UA
Pregnancy test
Cerebral spinal fluid
Urine drug screen
Anticonvulsant levels
ECG