

Emergency Seizure Management

At presentation:

Place an IV catheter

Check blood glucose
PCV/TS and
Electrolytes (with iCa)

Creatinine, Venous blood
gas, & Ammonia if
available

Monitoring:

1. Temp, heart rate
2. Respiratory rate/pattern
3. Mucus membranes & CRT
4. Blood pressure, +/- ECG
5. Pulse oximetry
6. Hydration
7. Rotate q4h
8. Express bladder/keep clean

Midazolam (or diazepam)

Midazolam 0.5mg/kg IV or IM
(Diazepam 0.5mg/kg IV or 1mg/kg rectally)

Can be repeated 3 times. These have a short half
life, so need long-acting anti-seizure drug

If no response, add Phenobarbital and/or Keppra



Naive Patient

Phenobarbital

On Phenobarbital

Loading dose 16mg/kg over 24h

Usually 4mg/kg q6h x4 doses,
but may go faster

Pull blood for phenobarbital level
(Non-serum separator tube)

Then 4-6mg/kg phenobarbital IV

Can take 20 minutes to take effect
Do not redose for 20 minutes

Give midazolam during this time if
needed

Seizures Continue

Keppra

Loading: 20-60mg/kg IV over 15
minutes

Seizures Stop

Maintenance phenobarbital:
2mg/kg PO q12h
Check serum levels in 2-3 weeks

Maintenance Keppra:
Keppra 30mg/kg PO TID
Keppra XR 30mg/kg BID (dogs)
Keppra XR 500mg SID (cats)

Seizures Continue*

Midazolam CRI

- 0.5-2mg/kg/h
- Dilute in D5W
or 0.9% saline

Propofol CRI

- 6mg/kg/h

Ketamine CRI

- 5mg/kg IV
loading dose
- 3-6mg/kg/h

Phenobarbital CRI

- 2-4mg/kg/h

Isoflurane

- 1-2%
- Maintain light
plane

*After phenobarbital and Keppra loading

*See monitoring above, may require intubation +/- ventilation