DOSING OF PHENYTOIN FOR ANEURSYMAL AND TRAUMATIC BRAIN INJURY PATIENTS >16 yo

1. LOADING DOSE : 15mg/kg with Maximum dose of 1500mg

   Use Total Body Weight in Non-obese patients.

   Use Dosing Weight in Obese Patients. 0.4(TBW-IBW)+IBW

   NOTE: While literature supports use of IBW for dosing, our obese TBI pts did not routinely reach the therapeutic range when IBW was used.

   May be given IV as phenytoin sodium if central line or fosphenytoin if peripheral line only.
   Oral load dose may be given with total amount divided into 2-3 doses of not more than 400mg given 2 hours apart.

2. MAINTENANCE DOSE: 5mg/kg IBW/day divided x 7days. Use IBW for all patients due to potential for accumulation.

   If IV, divide dose into 3 equal doses rounded to nearest 25mg and give q8h.

   Oral doses follow the same rules if given as oral chew tabs or oral solution. If capsules are used, which are sustained-release in their formulation, they may be given either divided as above or up to 400mg once daily (usually qhs).

   In elderly patients and those with elevated SCr, reduce dose by ~25% (rounded) and give q12hr.

3. MONITORING

   To check adequacy of loading dose, check FREE phenytoin level 4-6hours after completion of dose.

   If <1.0, provide additional load : dose (mg/kg)/10 = 0.7 (desired level x 10 – free level x 10) and recheck in 4-6hrs.

   If <2.3, continue as above. If >2.4, allow time for drug clearance before beginning maintenance dose.

   Further levels are not needed for 7 day prophylaxis unless seizures occur.

4. IMPORTANT REMINDERS

   Enteral doses need to be separated from tube feedings. Contact Pharmacist or Dietician to aid with scheduling.

   Patient may have received drug at outside hospital or by EMS if actively seizing at time of accident. Check baseline level if needed.

   Patients already on phenytoin prior to trauma, will NOT need reloaded but should have baseline level checked.

   Duration may be extended to 3-6 months in those who experience seizures.

Reviewed 1/24/17