Guidelines for Tranexamic Acid (TXA) In Major Trauma for Adults

Introduction
Tranexamic acid (TXA) is an antifibrinolytic agent which has been shown to reduce overall mortality and death due to bleeding among severely injured patients when administered within the first 3 hours following injury. This guideline applies to patients who present with suspected or confirmed life-threatening hemorrhage after trauma.

I. Indications for use in trauma:
- Patients who have activation of the Massive Transfusion Protocol (MTP) after traumatic injury.
- Systolic blood pressure < 90mmHg
- Empiric administration of TXA should be considered in patients who meet the following criteria:
  - Hemodynamically unstable patients (e.g. SBP < 100, HR > 110)
  - At risk for hemorrhage and refractory to crystalloid challenge (i.e. who will likely be receiving transfusion)
- Patient is >16 years of age **

II. Contraindications to use of IV TXA:
- Known hypersensitivity to tranexamic acid
- Do not delay more urgent critical resuscitation interventions to give TXA
- Isolated head injury
- Known history of severe renal failure
- Known history of thromboembolism
- Do not give in conjunction with PCCs.

III. Adverse Effects
- Anaphylaxis
- Thrombosis
- Hypotension (with rapid infusion, with rate > 100mg/min)
- Nausea, vomiting, diarrhea
- Visual disturbances (blurred vision, changes in color vision)

IV. Dosing and Administration
- Decision to administer TXA may be made at the level of PGY 4/5 or higher
- Infusion pump must be used for administration.
- Loading dose:
  - TXA is supplied in vials of 1 gram / 10 ml. Standard loading dose is 1 gram.
  - Bolus: 1 gram IV over 10 minutes
  - Add 1 gram to 100cc NS for a final concentration of 10mg/mL
- Infusion:
  - Standard IV infusion dose is 1 gram.
  - Add 1 gram to 250cc
  - Infuse 1 gram IV over 8 hours

V. Monitoring Requirements
- Blood pressure and signs of allergic reaction at: baseline, 5 minutes into loading dose, at the end of the loading dose, every 2 hours during infusion
- Clinical signs of thrombosis (i.e. MI, Stroke, PE, DVT) – baseline, daily during hospital stay
- At the completion of the 8 hour infusion, no further TXA will be administered

REFERENCES: