Tranexamic Acid (TXA) Administration

Note:

- TXA is an antifibrinolytic agent in common use for the treatment of a variety of bleeding disorders. An antifibrinolytic that prevents breakdown of blood clots. It is not a procoagulant (i.e. it does not promote the formation of blood clots.)
- Adjunctive control of hemorrhage and hemorrhagic shock via administration of a pharmacologic antifibrinolytic medication. Recent randomized controlled evidence indicates a significant mortality benefit in the administration of TXA to trauma patients with significant hemorrhage or considered at risk of such within 8 hours of injury.
- Subset analysis of this research demonstrated the greatest benefit is within the first 3 hours of injury.

EMERGENCY MEDICAL RESPONDER (EMR) / EMERGENCY MEDICAL TECHNICIAN (EMT), ADVANCED EMT (AEMT), INTERMEDIATE / PARAMEDIC

- This medication therapy is not applicable to these certification levels.

PARAMEDIC

Indications:

- Trauma patients, appearing to be 18 years old or greater with multi-system injuries, (this may include head injuries, but **not** isolated head injuries.)
    - Ongoing significant hemorrhage, or strong clinical suspicion of hemorrhage (systolic blood pressure less than 90 mmHg and/or heart rate greater than 110 beats per minute.)
    - Patients who are considered to be at risk of significant hemorrhage based on their mechanism of injury.
    - Trauma patients **within 3 hours** of the multi-system injury.
- Patients appearing to be 18 years old or greater with peri/postpartum hemorrhage and associated signs of hemorrhagic shock.
-

Contraindications:

- Known hypersensitivity to TXA
- Actively taking anticoagulants: Heparin, Enoxaparin (Lovenox,) Coumadin (Warfarin,) Dabigatran (Pradaxa) Apixaban (Eliquis,) Rivaroxaban (Xarelto.)
- Evidence of Disseminated Intravascular Coagulation (DIC)

- Past history of thrombotic disorder such as deep vein thrombosis (DVT) or pulmonary embolism (PE.)
- Known thrombophilia
- Greater than 3 hours from the time of injury
- Isolated head injury

Procedure:

- Preparation
  - TXA is supplied as 1g in 10mL (concentration of 100 mg/mL)
  - Loading Dose of 1 gram will be mixed in 100 mL Normal Saline and to infused over 10 minutes
  - Maintenance Infusion of 1 gram will be mixed in 100 mL Normal Saline and infused over 8 hours

- Intravenous Loading Dose:
  - 1 gram of TXA infused over 10 minutes can be given within 3 hours of injury
- Maintenance Infusion:
  - 1 gram of TXA infused over 8 hours given after the loading dose.
- Administration Considerations
  - Hypotension can occur with rapid administration
  - Those at increased risk of thromboembolic events should be limited to short term use only.
  - Pregnancy Class B – TXA should be used during pregnancy only if clearly needed

Documentation:

- Indication for TXA
- Contraindications if TXA is otherwise indicated
- Vital signs at least every 15 minutes
- Methods used to control external hemorrhage

APPROVED BY:

Michael Clark, MD; Medical Director

6/15/2018

Effective Date:
Revised Date:

Reference:

- The CRASH-2 Collaborators. Effects of tranexamic acid on death, vascular occlusive events, and blood transfusion in trauma patients with significant hemorrhage (CRASH-2): a randomized, placebo-controlled trial. *Lancet* 2010; **376**: 23-32.
- Roberts I, Shakur H, Ker K, Coats T, for the CRASH-2 Trial collaborators. Antifibrinolytic drugs for acute traumatic injury. *Cochrane Database Syst Rev* 2011; **1:** CD004896
- The CRASH-2 Collaborator. The importance of early treatment with tranexamic acid in bleeding trauma patients: and exploratory analysis of the CRASH-2 randomized controlled trial. *Lancet* 2011; Published **Online** March 24, 2011DOI:10.1016/S0140-6736(11)60278-X
- UW Health Med Flight Medical Guideline & Procedure