

# Low Titer O+ Whole Blood – Trauma

## History

- What was the mechanism of injury – blunt (MVC, fall, blow to body) vs. penetrating (stabbing, GSW, foreign body)?
- Did a medical condition contribute to the mechanism of injury? Other medical conditions?
- Medications – Coumadin? Plavix? Aspirin? Pradaxa? Xarelto? Eliquis? (any blood thinners or anticoagulants)
- Beta Blockers and Calcium Channel Blockers may not allow HR to increase appropriately

## Key Concepts

- Low Titer O + Whole Blood is now being used to treat severely injured trauma patients who have or are at risk for severe hemorrhage

## MARCHES Protocol

- **M**assive bleeding control
- **A**irway – NPA/OPA/ Crich
- **R**espiratory – decompress chest if tension pneumothorax, occlusive dressing for open pneumothoraces
- **C**irculation- IV/IO TqX, pelvic binder, wound packing
- **H**ypothermia care
- **E**ye injuries – cover with rigid shield and no pressure on the eye
- **S**pinal motion restriction if indicated

## Criteria

**HEMORRHAGIC SHOCK** in medical or trauma Adult and Pediatric ( $\geq 6$  yo) patients

## Relative Contraindications

- Patient < 6 years old
  - Consult Medical Direction if patient is in hemorrhagic shock and < 6 yo
  - Medical Director may elect to give blood in patients < 6 yo

## Contraindications

- Religious objection to receiving whole blood—consult On Call Medical Director

## EMT

- Follow Trauma General Patient Care Guideline
- Follow appropriate Trauma Guideline

## Paramedic

### **For Patients in HEMORRHAGIC SHOCK:**

**Administer Whole Blood with signs of acute hemorrhagic shock as evidenced by:**

- Systolic Blood Pressure < 70 mmHg **OR**
- Systolic Blood Pressure < 90 mmHg with Heart Rate  $\geq 110$  beats per min **OR**
- ETCO<sub>2</sub> < 25 **OR**
- Witnessed traumatic arrest < 5 min prior to provider arrival and continuous CPR throughout downtime **OR**
- Age  $\geq 65$  yo and SBP  $\leq 100$  **AND** HR  $\geq 100$  beats per minute

In general only 500mL (1 unit) of Low Titer O+ Whole Blood (LTO+WB) will be available per patient. If more than 500 mL of Whole Blood is available onscene the following general guidelines apply:

- 6-10 yo are eligible for 500 mL of Whole Blood
  - Consult Medical Direction for further orders, if needed
- 11-13 yo are eligible for 1000 mL of Whole Blood
  - Consult Medical Direction for further orders, if needed
- $\geq 13$  yo are eligible for >1000 mL of Whole Blood
  - Consult Medical Direction for further orders, if needed

Of Note: At this time the LTO+WB does not have volume markings on the bag.