**Impact of Time to Surgery on Mortality in Hypotensive Patients with Non-compressible Torso Hemorrhage: an AAST Multicenter, Prospective, Observational Study**

Reporting center: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Patient number (sequential within center): \_\_\_\_\_\_  
  
 **Admission Data**  
Age (in years):\_\_\_\_\_\_\_\_\_\_\_ (range 16 – 99 years) Admit date (M/D/Y): \_\_\_\_\_\_\_\_\_\_\_

Gender (circle one): Male Female

Race (circle one): White African American Hispanic Asian Other/Unknown

Any fluid resuscitation therapy given pre-hospital? Yes No  
 If yes:   
 Crystalloids (ml): \_\_\_\_\_\_\_\_\_\_\_\_   
 Packed red blood cells (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Fresh frozen plasma (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Platelets (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Cryoprecipitate (units): \_\_\_\_\_\_\_\_\_\_\_\_

Admission vital signs  
 Glasgow Coma Scale (GCS): \_\_\_\_\_\_\_\_\_\_\_\_ (Range 3 – 15)  
 Respiratory rate (RR; breaths per minute): \_\_\_\_\_\_\_\_\_\_\_\_  
 Heart rate (HR; beats per minute): \_\_\_\_\_\_\_\_\_\_\_\_  
 Systolic blood pressure (SPB; mmHg): \_\_\_\_\_\_\_\_\_\_\_\_  
 Shock index (HR/SBP): \_\_\_\_\_\_\_\_\_\_\_  
  
Admission laboratory values

(First values obtained at time of presentation)

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Laboratory test** | **Value** | **Missing/Unknown** |
|  | Hemoglobin |  |  |
|  | Hematocrit |  |  |
|  | Lactate |  |  |
| Coagulation assays | Fibrinogen |  |  |
| Prothrombin time (PT) |  |  |
| Partial thromboplastin time (PTT) |  |  |
| International Normalized Ratio (INR) |  |  |
| Platelet count |  |  |
|  | pH |  |  |
|  | PaO2 |  |  |
| ABG values | pCO2 |  |  |
|  | HCO3 |  |  |
|  | Base deficit |  |  |
|  | SaO2 |  |  |

Method of transport to hospital (choose one):  
EMS Police Private vehicle Unknown  
  
**Time variables (Enter all time variables in minutes)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable** | **Variable definition** | **Time (in minutes)** | **Missing/Unknown** |
| Prehospital time | Time from activation of EMS to presentation of patient to ED. **If patient was delivered by personal vehicle, report time of injury to time of ED arrival.** |  |  |
| ED time | Time from ED presentation to OR |  |  |
| OR prep time | Time from arrival in OR to time of skin incision |  |  |
| Time from ED presentation skin incision | Sum of ED time and OR prep time |  |  |
| Total time | Sum of prehospital time, ED time, and OR prep time |  |  |

**Injury characteristics:**  
Injury type: (Circle one)  
 Blunt  
 Penetrating  
Mechanism of Injury (MOI):  
 If blunt: (Circle one)  
 MVC  
 MCC  
 Auto vs Ped  
 Blast  
 Crush  
 Other (specify)  
 If penetrating: (Circle one)  
 Stab wound  
 Gunshot wound

Severity of Injury:   
 AIS score (record for each chest, abdomen and pelvis): \_\_\_\_\_\_\_\_\_\_\_\_ (range for each score 1 – 6)  
 Penetrating Abdominal Trauma Index (PATI) (if applicable) \_\_\_\_\_\_\_\_\_\_  
 New Injury Severity Score (NISS) \_\_\_\_\_\_\_\_\_\_\_\_\_\_  
  
CT-verified TBI? (Choose one) Yes No  
 If Yes, did the TBI require surgery? (Choose one) Yes No  
 If yes to TBI, enter Head AIS score (enter numerical value from range 1 – 6) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Location of injury (choose all that apply):   
 Chest Pelvis Abdomen

Fluid resuscitation therapy in ED:   
 Crystalloids (ml): \_\_\_\_\_\_\_\_\_\_\_\_   
 Packed red blood cells (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Fresh frozen plasma (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Platelets (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Cryoprecipitate (units): \_\_\_\_\_\_\_\_\_\_\_\_

Time from ED presentation to infusion of first crystalloid? (in minutes) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
Time from ED presentation to infusion of first PRBC? (in minutes) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
Time from ED presentation to infusion of first FFP? (in minutes) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Was thromboelastography (TEG) performed? Yes No  
If TEG was performed, please provide values from each run of TEG.   
**ALL TIME VALUES IN MINUTES FROM TIME OF ED PRESENTATION**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **TEG Values** | **1st TEG** | **2nd TEG** | **3rd TEG** | **4th TEG** | **5th TEG** |
| Time since ED arrival |  |  |  |  |  |
| R value |  |  |  |  |  |
| K value |  |  |  |  |  |
| α – angle (degrees) |  |  |  |  |  |
| K time |  |  |  |  |  |
| TMA |  |  |  |  |  |
| MA (mm) |  |  |  |  |  |
| LY30 (%) |  |  |  |  |  |

Interventions performed prior to transferring patients to the OR:  
 Intubation (circle one): Yes No  
 Foley catheter placement (circle one): Yes No   
 Chest tube placement (circle one): Yes No   
 Pelvic fracture stabilization (circle one): Yes No  
 If yes, choose stabilization method: (circle one)  
 Pelvic binder  
 Pelvic sheet wrap   
 TPOD  
 Other (Specify)  
 Tourniquet placement (circle one): Yes No  
 If yes, indicate where tourniquet was placed: Field ED  
 If yes, indicate tourniquet type: Commercial Improvised  
 REBOA (circle one): Yes No  
 If yes:  
 Time from ED presentation to balloon inflation (in minutes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
   
 Imaging studies (circle one): Yes No   
 Type of imaging study (circle all that apply):   
 Chest X-ray Pelvis X-ray Head CT Chest CT Abdomen/Pelvis CT FAST   
  
If FAST was performed, were findings positive or negative?(choose one) Positive Negative

**Operative Room Data**

Years of experience of operating surgeon: \_\_\_\_\_\_\_\_\_\_\_\_\_ (numerical value range 0 – 70 years)  
Type of OR utilized (circle one): Hybrid OR Regular OR   
OR vital signs:   
 Heart rate (Highest reading): \_\_\_\_\_\_\_\_\_\_\_\_ Missing/Unknown   
 Systolic blood pressure (Lowest reading): \_\_\_\_\_\_\_\_\_\_\_\_ Missing/Unknown

Fluid resuscitation therapy   
 Crystalloids (ml): \_\_\_\_\_\_\_\_\_\_\_\_   
 Packed red blood cells (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Fresh frozen plasma (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Platelets (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 Cryoprecipitate (units): \_\_\_\_\_\_\_\_\_\_\_\_   
 TXA administration (circle one): Yes No   
 If yes to TXA (circle one): Bolus only Bolus + Drip   
 Time to TXA from EMS activation (in minutes): \_\_\_\_\_\_\_\_  
 Location of TXA administration (circle one): ED OR   
 Dose of TXA administered: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Intraoperative injuries (circle one):

Chest

Lung  
 Heart   
 Vascular structures   
 Abdomen

Diaphragm  
 Liver  
 Spleen

Pancreas  
 Gastrointestinal/mesentery

Vascular structures  
 Pelvis

Genitourinary  
 Vascular structures

Injured vascular structures:(Choose all that are applicable from drop box)  
 If venous:  
 Superior vena cava  
 Inferior vena cava  
 Subclavian  
 Axillary  
 Brachial  
 Renal   
 Portal  
 Iliacs  
 Femoral   
 Popliteal  
 If arterial:  
 Aorta  
 Carotids  
 Subclavian  
 Axillary  
 Brachial  
 Renal  
 Iliacs  
 Femoral  
 Popliteal  
 Superior mesenteric artery  
 Inferior mesenteric artery  
 Celiac trunk  
 Other  
Time to correction of surgical bleeding defined as time from ED presentation to hemostasis (in minutes): \_\_\_\_\_\_\_ (Provide option to indicate if Missing/Unknown)

Damage control laparotomy (circle one): Yes No   
 If yes to DCL, record time from ED presentation to abdominal closure (in minutes): \_\_\_\_\_\_\_\_\_\_\_\_   
 (Provide option to indicate if Missing/Unknown)   
   
Time from ED presentation to Wound VAC placement or wound closure (in minutes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Intraoperative cardiac arrest (circle one): Yes No

Outcome (circle one): Lived Died

**ICU Data**

Highest lactate in the first 24 hours after surgery: \_\_\_\_\_\_\_\_\_\_\_\_

Highest base deficit in the first 24 hours after surgery: \_\_\_\_\_\_\_\_\_\_\_\_

**Number of resuscitation therapy products given in specific time frames**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Blood products** | **0 – 3 hours** | **4 – 6 hours** | **7 -24 hours** | **Total for 24 hours** |
| Crystalloids |  |  |  |  |
| Packed red blood cells (PBRC) |  |  |  |  |
| Platelets |  |  |  |  |
| Fresh frozen plasma (FFP) |  |  |  |  |
| Cryoprecipitate |  |  |  |  |

\*Round to nearest hour. For ex, 3 hours and 24 minutes = 2 hours. 3 hours and 48 minutes = 4 hours.

**Discharge Data**

Date of Discharge: \_\_\_\_\_\_\_\_\_\_\_ Hospital length of Stay (LOS) (days): \_\_\_\_\_\_\_\_\_\_

ICU-free days:\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Calculated as days alive and monitored in a non-ICU setting until day 30. ICU-free days = 0 for subjects who die.)

Ventilator-free days: \_\_\_\_\_\_\_\_\_ (Calculated as the number of days alive and free from mechanical ventilation until day 30. VF days = 0 for subjects who die.)

Outcome (circle one): Lived Died   
   
**If patient expired:**   
Time to death (in days): \_\_\_\_\_\_\_\_

Did death occur within 1st 24 hours (circle one): Yes No

Death Location (choose one): Pre hospital (vital signs on scene but loss of vitals en route to ED) ED OR ICU Floor

Was primary cause of death hemorrhage? (Choose one) Yes No