**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