MEMO

Date: June 5, 2018

To: Trauma Multidisciplinary Committee Members

From: Dennis Ashley, MD
Chair, Trauma Multidisciplinary Committee

The Trauma Multidisciplinary Review committee met Tuesday, May 22, 2018 for our monthly review. Please find the following teaching points and synopsis of the discussion. Please share this information with physicians from your Department who participate on the Trauma Call schedule.

ED Thoracotomy:
Many patients will present to the emergency room in extremis after sustaining major trauma. CPR and other resuscitation procedures may be in progress. Immediate access to the thoracic cavity through an emergency department thoracotomy may be indicated in some circumstances. A thorough knowledge of thoracic anatomy and surgical technique is paramount when performing this procedure.

Indications

*Salvageable post-injury cardiac arrest:*
- Patients sustaining witnessed penetrating thoracic trauma with < 15 min of prehospital CPR.
- Patients sustaining witnessed penetrating nonthoracic trauma with < 5 min of prehospital CPR.
- Patients sustaining witnessed blunt trauma with <10 min of prehospital CPR.
- *Persistent severe post injury hypotension (SBP <60 mm Hg) due to:*
  - Cardiac tamponade
  - Hemorrhage-intrathoracic, intra-abdominal, extremity, cervical
  - Air embolism
Contraindications
- CPR >15 min following penetrating injury and no signs of life (pupillary response, respiratory effort, or motor activity)
- CPR >10 min following blunt injury and no signs of life
- Asystole is the presenting rhythm and there is not pericardial tamponade

**Blunt Cerebrovascular Injury (BCVI):**
This is a rare injury that requires a high index of suspicion when managing patients with blunt trauma. The Denver Modification of Screening Criteria are noted below.

**Signs and symptoms of BCVI:**
- Arterial hemorrhage
- Cervical bruit
- Expanding cervical hematoma
- Focal neurologic deficit
- Neurologic exam incongruous with head CT scan findings
- Ischemic stroke on secondary CT scan

**Risk factors for BCVI include high-energy transfer mechanism with**
- Lefort II or III fracture
- Cervical spine fractures patterns: subluxation, fractures extending into the transverse foramen, fractures of C1-C3
- Basilar skull fractures involving the carotid canal
- Diffuse axonal injury with a Glasgow Coma Scale ≤6
- Near hanging with anoxic brain injury