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Traumatic Arrest

Purpose: To define the appropriate priorities and procedures for the management of traumatic arrest and describe the steps in the evaluation of the trauma patient in cardiac arrest and to limit futile care

Definitions:

Signs of life are defined as agonal breathing, any movement, any electrical activity, or any obtainable pulse or blood pressure at the scene, en route, or in the Emergency Department

Guidelines:

- A. Blunt traumatic arrest with signs of life
 - a. Transfer patient onto trauma gurney and continue ACLS protocol according to continual monitoring of the patient's EKG rhythm
 - b. Complete a rapid primary survey
 - i. Confirm presence or absence of spontaneous cardiac and/or respiratory activity
 - c. Perform endotracheal intubation and obtain large bore IV access
 - d. Pleural decompression: Insert 14-gauge IV catheter into the second intercostal space in the midclavicular line in both sides of the chest
 - i. Make sure that the needles puncture into the pleural space and that the steel needles are removed, leaving the plastic cannula in place
 - ii. If a large amount of air or blood is obtained out of either cannula, then immediately insert a chest tube into that side of the chest
 - 1. Alternatively, insert chest tube on both sides of the chest as initial procedure
 - e. Run IVs at full open rate with Rapid Infuser, transitioning to blood products after first liter of crystalloid
 - f. If these measures successfully reestablish pulse, rapidly assess with FAST and transport emergently to OR for operative intervention
 - i. Continue blood product resuscitation
 - 1. Activate MTP
 - 2. Consider TXA
 - g. In the absence of successful return of pulse, ED thoracotomy may be considered
 - i. It should be noted that ED thoracotomy for blunt trauma arrest has essentially 100% mortality and should not be performed routinely

- ii. It may be considered if there is some cardiac activity on FAST to allow aortic cross-clamping just above diaphragm, internal cardiac massage, and continued resuscitation with blood products
- iii. Rapidly assess with FAST and if return of pulse is achieved, transport the patient emergently to the OR for further resuscitative and operative intervention
- iv. If no return of pulse after 10-15 minutes of rapid infusion of blood products and internal cardiac massage, terminate resuscitation

B. Penetrating chest injury

- a. See Penetrating Chest Injury guideline

C. Penetrating abdominal injury resulting in traumatic arrest with signs of life

- a. See Penetrating Abdominal Trauma guideline

References:

- Deaconess Trauma Guideline Emergency Resuscitative Thoracotomy