Instructions

This is a case study dealing with blunt force trauma, more specifically chest wall trauma and its underlying complications. This training can be delivered as a scenario-based practical evolution or as a tabletop discussion.

As with all patients suffering significant trauma, surgery is the definitive treatment and a rapid assessment and transport is key for patient survival.

As with all training scenarios consult your department's medical protocols and S.O.P. when reviewing this training.

This scenario should last between 30 minutes to one hour depending on class size. Each student should give a report of their clinical findings, treatments, patient's condition after treatment, and a hospital report.

Goal

The student working as a member of an ALS Engine Company shall be able to recognize the signs and symptoms of blunt force trauma to the chest of a given patient and treat the patient accordingly.

Objectives

1. Perform a proper scene size-up.
2. Perform a primary patient assessment.
3. Perform a trauma assessment.
4. Recognize signs and symptoms of blunt force trauma.
5. Administer appropriate treatment.
Scenario

You are assigned to Engine Company 24. Staffing levels are consistent with your department. At 1800 hours your company receives a medical alarm at the local high school. Pre-arrival information is as follows: A 35-year-old man was hanging holiday decorations inside the gym. The mobile scaffolding that he was using collapsed causing him to fall approximately 30 feet to the hardwood gym floor. At this time bystanders are reporting that he is not awake but is breathing. The third party ambulance service is also responding. Your crew arrives on scene at 1806 and at the patient's side at 1808. A frantic man gives you the followings:

“We were hanging these here lights when that rickety scaffold just plumb gave out. Junior fell and hit his chest on that there vaulting horse that we were using to prop up one side of that scaffolding. I told him that looked kind of shaky. He was leaning way over the side and said 'watch this' right before he fell.”

Bystanders had removed the scaffolding from around Junior and moved him to the one side of the gym floor.

Assessment Findings

35-year-old male unresponsive, snoring respirations.

Head, Ears, Eyes, Nose, Throat:

No evidence of trauma to head or neck, snoring respirations, jugular venous distention.

Chest:

Large reddened area mid chest, sternal retraction with respiratory effort. Muffled heart tones. Decreased lung sounds.

Abdomen:

Soft, not tender, no signs of trauma.

Extremities:

Bruising as expected from a fall of significant height.

Vital Signs:

Blood pressure: 110/60
Respiratory rate: 24 shallow
Lung sounds: decreased in all fields
Oxygen saturation: 90%
LOC: unresponsive
Pulse: 130, weak
EMS Case Study #2  Blunt Trauma

Pupils: slow to react

Critical Decision Factors

- Is the patient able to maintain his airway?
- Why is there a decrease in LOC without signs of head injury?
- What is significant about the muffled heart sounds?
- Is the “mechanism of injury” important in this case?

Key Treatment Issue

- Is the scene safe to enter?
- ABC with history.
- Secure airway, assist ventilations with BVM.
- Monitor blood pressure for a narrowing of pulse pressures.
- Rapid Transport with spinal precautions.
Radio/Hospital Report

The radio/hospital report should be similar as follows:

(Hospital) we transporting to you 35 year old male victim of a fall greater than 15 feet suffering from apparent blunt force trauma to chest. Patient is unconscious and unresponsive. We are able to maintain his airway with basic maneuvers and an oral airway. Assisting ventilations with BVM and supplemental oxygen. Last blood pressure was 110/60, pulse rate was 130 and weak. Patient is immobilized. No other medical history is known……

Summary

Any patient with blunt force chest trauma needs to be evaluated as soon as possible by a properly equipped trauma center. These patients can only recover with surgical intervention.