District III EMS
Quality & Improvement
Case of the Month - March 2004

Chief Complaint: Snow Machine Crash

Pre-hospital course:

0215 Hrs: EMS (BLS/ALS Squad) arrives on scene of a snow-machine crash. The patient is a 36 year old male who bystanders say was driving his snow-machine at a high rate of speed, became airborne and crashed. The patient was found on the ground by a friend and moved to the back of a near-by jeep. The crash occurred approximately 30 minutes prior to EMS arrival on scene. Upon EMS arrival the pt was noted to be intermittently alert, combative, and intoxicated. When alert, the pt was complaining of left rib and side and shoulder pain, and facial trauma. The pt had diminished breath sounds on the left side. The pt was boarded and collared, oxygen was administered, and transport to FAHC was initiated.

0225 Hrs: EMS incident report record notes pulse 141, BP 116/Palp, RR 30. No additional vital signs recorded en-route.

0231 Hrs: EMS reports to FAHC that they are transporting a 36 year old male involved in a snow-machine crash. It is noted that the pt is intoxicated, and that he was "combative, followed by periods of sleeping off the alcohol". Oxygen saturation was noted to be 80%. The radio room personnel asked the EMT for additional information regarding the pts vital signs (RR, skin condition, GCS) and the mechanism of the crash (rate of speed, cause of collision, helmet). EMT response was that the facial injuries appeared to be from the pt biting his tongue, that he was intoxicated and combative, and that this was not a trauma alert. Radio room notified ED staff of this patient, and that the EMTs in the field did not feel the pt to warrant a trauma alert.

Emergency Department Course:

0241 Hrs: Pt arrives in the ED in obvious respiratory distress. A trauma alert is paged.

0244 Hrs: BP 118/90, RR 36, HR 149. Left chest needled and a left sided chest tube inserted.

0255 Hrs: BP 127/79, HR 159. Pt yelling, combative.

0300 Hrs: Pt intubated using rapid sequence induction. The remainder of the trauma evaluation and resuscitation was uneventful.

Hospital Course: The pt was found to have the following injuries. Right maxillary wall and orbit fracture, right subcondylar mandibular fracture/dislocation, left pneumothorax/pneumomediastinum, bilateral pulmonary contusions, left clavicle fracture, left scapular fracture, multiple rib fractures, left pubic ramus fracture, right sacral fracture, small subcapsular splenic hematoma. The pt was admitted to the Trauma service, had an uneventful recovery, and was discharged with outpt rehab.

Take Home Message: An immediate Trauma Alert should have been called for this patient. In the multi-trauma victim, one must never assume that abnormal vital signs or level of consciousness are due to alcohol intoxication. Delay in notification of the trauma service might have had an adverse impact in this patient's care.

Quality Improvement:

Criteria for an Adult Trauma Alert:

Any one of the following criteria requires activation of the Trauma Alert System

A. GCS < 12
B. Hypotension (SBP < 90)
C. Respiratory Compromise (RR < 10 or >30)
D. Amputation proximal to the wrist or ankle
E. Penetrating injury to the chest, neck, or abdomen

This patient was in respiratory distress with a RR of 36 upon arrival to the ED, and an oxygen saturation of 80% measured in the field and diminished left-sided breath sounds. These findings should have prompted a Trauma Alert. It is critical to report full vital signs and mechanism of injury to medical control.

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This multi-trauma victim was intermittently combative and lethargic at the scene. Can this presentation be attributed to acute intoxication? Remember, most trauma victims are drunk males; they do get injured. One must assume that altered mental status in a trauma victim is due to a potentially life-threatening etiology, such as a head injury or hypoxia. Only after such injuries are ruled-out can one attribute such behavior to Budweiser.

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