

EMT-PARAMEDIC AND BEYOND

TRAUMA SCENARIOS

SCENARIO ONE

While attempting a getaway, a 23 year old purse snatcher ran into the street and was struck by an automobile. He is supine, still lying in the middle of the road.

- SCENE SAFETY:** Cars are attempting to bypass the scene on either side.
- GENERAL IMPRESSION:** The patient appears to be conscious on approach with no major blood loss noted around patient.
- LOC:** He is awake, alert, and extremely anxious.
- CHIEF COMPLAINT:** Pain in the right chest and hip.
- AIRWAY:** Open
- BREATHING:** Slightly labored and rapid respirations
- CIRCULATION:** Radial pulses are present but are weak and rapid. Capillary refill is >2 seconds. Skin is pale but dry.
- HEAD, FACE, NECK:** Some mild road rash but no other obvious trauma. Trachea midline. Neck veins visible but not distended.
- CHEST:** Bruising and abrasions on the right lateral thorax with multiple areas of point tenderness. The right side is somewhat hyperresonant to percussion. The patient seems to be having difficulty breathing deeply due to pain, so you have trouble hearing breath sounds.
- ABDOMEN:** Bruising and abrasions with tenderness on the right lateral side of the belly – no distention.
- PELVIS:** Bruising and abrasions on the right side with severe pain on palpation and instability of that side.
- LEGS:** Road rash noted mostly on right leg but no obvious bleeding or deformities. +PMS.
- UPPER EXTREMITIES:** Road rash on right arm with no deformity. +PMS.
- BACK:** Spine clear of deformity of tenderness. Bruising and tenderness on lateral right wall.
- GCS:** 15

During loading patient to board and to truck, the patient suddenly shouts, “Gotta pee!” and passes a large amount of grossly bloody urine.

- VITAL SIGNS:** BP: 90/60, P: 130 and weak, R 36 and shallow but labored. O2 sat 87% . ECG Sinus tach.
- SAMPLE:** Patient denies allergies or any significant past medical history. He can't remember the last time he ate.
- LOC/GCS:** Seems to be more confused and is becoming combative.
- AIRWAY:** Still open

EMT-PARAMEDIC AND BEYOND

BREATHING: Respiratory distress seems to be worsening. O₂ sat now 78%.

CIRCULATION: Radial pulses have disappeared, no brachial or femoral, carotid is weak and faster than before. Skin is pale and moist.

HEAD, FACE, NECK: Pupils are dilated to a 7 and sluggishly responsive. Neck veins are becoming distended.

CHEST: The left side of the chest seems to be inflating better than the right. Breath sounds seem to be harder to hear on the right.

(Critical intervention of chest decompression MUST be performed at this point prior to proceeding further.)

REASSESSMENT: Patient's condition will improve if high flow O₂, decompression performed, IV's established with appropriate fluid, MAST.
If above is not done, patient's condition to deteriorate requiring intubation, etc.

GOALS: Recognition of unsafe scene and securing scene and or patient to safety.
Immediate application of O₂ early in ABC's.
Full spinal restriction procedures.
Recognition of need to transport to Trauma Center and off scene with only necessary interventions.
Recognition of need for needle chest decompression.
Establish 2 large bore IV's and run wide open up to 4 L.

SCENARIO TWO

A 16 year old male was struck in the head with a thrown bat during a softball game. He reportedly lost consciousness immediately. But by the time you arrive, he is conscious again.

SCENE SAFETY: Scene is safe.

GENERAL IMPRESSION: The patient appears to be conscious on approach with no major blood loss noted around patient.

LOC: He is awake and alert.

CHIEF COMPLAINT: Pain in the left temporal area of the skull.

AIRWAY: Open

BREATHING: Normal rate and depth.

CIRCULATION: Pulse is strong and regular at the wrist, but seems to be a little fast. Capillary refill is < 2 seconds. Skin is warm, dry and pink.

HEAD, FACE, NECK: You note a scalp laceration, approximately 2 inches long, in the left temporal area. It is still bleeding some. The skull appears to be stable on palpation at the site.

CHEST: No trauma noted. Lung sounds clear and equal bilaterally.

ABDOMEN: No trauma noted

EMT-PARAMEDIC AND BEYOND

PELVIS: No trauma noted. Pelvis stable.
LEGS: No trauma noted. +PMS.
UPPER EXTREMITIES: No trauma noted. +PMS.
BACK: Spine clear of deformity of tenderness.
GCS: 15

VITAL SIGNS: BP: 126/92, P: 110 strong and regular, R 18, shallow and regular. O2 sat 97% ECG Sinus tachycardia
SAMPLE: Patient is allergic to PCN. No medical problems. He ate a full lunch about an hour ago. He was at the dugout when he was struck by the bat.
LOC/GCS: Seems to be becoming drowsy.
AIRWAY: Still open

The patient vomits and then has about one minute of generalized seizure activity, then becomes unconscious.

LOC/GCS: 6 with patient responding to pain by becoming rigid, arching his back, and flexing his upper extremities
AIRWAY: Open
BREATHING: Now labored, regular respirations
CIRCULATION: Radial pulses present and strong and regular but much slower. Skin is warm and dry but pale
VITAL SIGNS: BP: 216/110, P: 56, R: 28 ECG Sinus Bradycardia
BLOOD GLUCOSE: 110 mg/dcL
HEAD, FACE, NECK: Left pupil is dilated to 8 and unresponsive. Right pupil is about 3 and responsive to light.
CHEST: Clear with respirations clear and equal bilaterally.
REMAINDER: Remainder of assessment is as it was.
REASSESSMENT: Patient's condition will improve if high flow O2 and then O2 with BVM at 12 – 24 bpm, IV's TKO, appropriate sedation, paralytics and oral intubation, full spinal restriction.

GOALS: Recognize the potential for epidural hematoma and need to transport to Trauma Center with spinal restriction.
Recognizes need for high flow O2, IV's to be administered at TKO.
Recognizes need for sedation and then going straight to Norcuron.

SCENARIO THREE

A 34 year old, 220 lb., employee of a heating/air conditioning repair business was working on a furnace when an explosion occurred. The fire department found him lying

EMT-PARAMEDIC AND BEYOND

against the wall on the opposite side of the room. The area was filled with smoke. The patient was unresponsive when found. It has been approximately 10 minutes since the explosion on your arrival.

SCENE SAFETY: Scene is safe. The patient has been dragged by his shirt from the burning building, far enough away to be safe.

GENERAL IMPRESSION: Patient is supine on the ground with his shirt charred and burned all the way across the chest and abdomen. He appears to be in respiratory distress.

LOC: Unresponsive to painful stimuli.

CHIEF COMPLAINT: No verbal complaints.

AIRWAY: Open but sounds of stridor are present.

BREATHING: Rapid and stridorous.

CIRCULATION: Radial pulses are weak and rapid. Hands are burned making it difficult to check cap refill.

HEAD, FACE, NECK: Face is burned, and the nasal mucosa is red and dry. There are salmon pink burns with blistering on the face, around mouth and nose, and on the anterior neck.

CHEST: Burns that are dry, gray, and thick looking are present across the anterior chest. Wheezing and rhonchi present throughout all lung fields.

ABDOMEN: Burns extend down across abdomen.

PELVIS: Burns present here as well – dry and thick. Pelvis stable.

LEGS: Burns also present on anterior surface of both thighs to knees – gray, dry, etc. Weak distal pulses, no MS noted.

BACK: Spine clear of deformity of tenderness.

UPPER EXTREMITIES: Salmon pink burns with blisters that are circumferential around both upper and lower arms. Weak distal pulses, no MS noted.

GCS: 3

VITAL SIGNS: BP: 100/78, P: 110 strong and regular, R 48 stridorous and labored. O2 sat 70%, ECG Sinus Tach

SAMPLE: No history available.

HEAD TO TOE: Allow student to complete again with no obvious changes until they get to vital signs again.

VITAL SIGNS: BP: 72/50, P 136 weak and regular.

REASSESSMENT: Everything the same except bruising now becoming obvious over left lower rib cage and left upper quadrant.

GOALS: Immediate airway management with c-spine precautions mandatory. BVM with 100% O2, spinal immobilization.

Very early intubation is required and paralytics are not necessary. If student doesn't intubate early, patient deteriorates to early death.

EMT-PARAMEDIC AND BEYOND

Immediate recognition of the need for transport to a burn center.

In unit, patient's BVM should be attached to humidified oxygen.

Two large bore IV's should be established if possible. Since the patient has circumferential burns on arms, the student should consider the lower leg and external jugular.

Parkland Burn Formula should be calculated and fluids started prior to the decrease in BP and noted bruising.

If only one IV, would be wide open with 15 gtt set because amount would be 433 gtts/min.

If 2 with 15 gtt sets, each would be set at 217 gtts/min. – almost 4 gtts/sec.

When patient becomes shocky due to bleed, IV's to be increased to wide open to 4 L. MAST to be placed and inflated.

SCENARIO FOUR

The patient in the last scenario has been transported by helicopter. The Fire Department has asked that you stand by at the scene since the fire has gone to three alarms. After about 30 minutes of waiting, there is a flurry of activity and a group of firefighters come running out of the building carrying a firefighter who appears to be unconscious. You are told that the patient became disoriented, got lost in the building, and ran out of air before being rescued.

SCENE SAFETY: Scene is safe. The patient has brought to a safe distance from the burning building.

GENERAL IMPRESSION: The fireman have carried the man into your truck and laid him on your stretcher where he appears to lie unresponsive.

LOC: Unresponsive to painful stimuli.

CHIEF COMPLAINT: No verbal complaints.

AIRWAY: Open.

BREATHING: Rapid and shallow.

CIRCULATION: Radial pulses are full, strong and rapid. Capillary refill is at 2 seconds. His skin is warm and dry and flushed.

HEAD, FACE, NECK: There are no burns or evidence of airway injury. No signs of visible external trauma. Pupils are dilated and react sluggishly to light.

CHEST: No obvious signs of trauma. Breath sounds are present bilaterally with no rales, rhonchi, or wheezing.

ABDOMEN: No obvious signs of trauma.

PELVIS: No obvious signs of trauma. Pelvis stable.

LEGS: No obvious signs of trauma. +PMS.

BACK: Spine clear of deformity of tenderness.

UPPER EXTREMITIES: No obvious signs of trauma. +PMS.

GCS: 3

EMT-PARAMEDIC AND BEYOND

VITAL SIGNS: BP: 140/90, P: 120 full and regular, R: 32 shallow and regular. O₂sat is 99% with the patient receiving oxygen via bag valve mask., ECG Sinus Tach

BLOOD GLUCOSE: 100 mg/dcL

SAMPLE: Fellow firefighters say that their friend is healthy to their knowledge but they know nothing else. They say he did eat lunch about 3 hours ago.

HEAD TO TOE: Same as noted above.

GOALS: Immediate recognition of possible carbon monoxide poisoning should lead the student to hyperventilate the patient with 100% O₂.
Intubation may be considered early.
Transport considerations for facility with hyperbaric oxygen capability.
IV's en route.

SCENARIO FIVE

A 34 year old female fell down a flight of stairs, striking her head on a concrete floor.

SCENE SAFETY: Scene is safe.

GENERAL IMPRESSION: The patient is lying at the base of the stairs, not moving. The patient's arms are held to her chest in a flexed position.

LOC: Unresponsive to painful stimuli.

CHIEF COMPLAINT: No verbal complaints.

AIRWAY: Open.

BREATHING: Shallow and regular. She appears to be breathing only with her belly.

CIRCULATION: Radial pulses are weak but seem to be within normal ranges and regular. Skin is warm and dry.

HEAD, FACE, NECK: There is a deep 1 inch laceration to the patient's forehead. There is no obvious deformity, spasm, or tenderness of the neck. Trachea is midline. -JVD.

CHEST: No obvious signs of trauma. Breath sounds are present bilaterally with no rales, rhonchi, or wheezing. Movement of the chest wall during breathing seems to be diminished.

ABDOMEN: No obvious signs of trauma.

PELVIS: No obvious signs of trauma. Pelvis stable.

LEGS: No obvious signs of trauma. +PM -S.

BACK: Spine clear of deformity of tenderness.

UPPER EXTREMITIES: No obvious signs of trauma. +P -M -S. However, her arms are flexed tightly to her chest. If the student attempts to straighten one and release it, it returns to the flexed position.

GCS: 3

EMT-PARAMEDIC AND BEYOND

VITAL SIGNS: BP: 76/50, P: 72 and weak, R 28 and shallow but regular.
O2 sat is 92 %. ECG Sinus rhythm
BLOOD GLUCOSE: 104 mg/dcL
SAMPLE: No history available.

When endotracheal intubation is attempted, the student is unable to visualize the cord in 2 attempts.

HEAD TO TOE: Assessment is all as above except now patient has blood draining from the right ear.

GOALS: Immediate airway control with BVM and 100% O2 while maintaining C-spine. Full spinal precautions.
Recognition of spinal shock with recognition for need for prompt transport to Trauma Center.
Treatment of spinal shock with blanket and consider elevating foot of stretcher. MAST.
Intubation orally and when attempts fail, the student should recognize need for Combitube, which will be successful.
IV's.
Contact Medical Control for Solu Medrol IVPB.

SCENARIO SIX

You respond to a 1 vehicle accident involving an elderly man who ran off the road and ran his car head on into a tree at an unknown speed.

SCENE SAFETY: Scene appears to be safe. The car has significant front end damage and the driver's door is crumpled into the frame. It looks as if both it and the passenger door will be hard to open.

GENERAL IMPRESSION: The patient is still in the drivers seat, moaning, with blood oozing from a cut on his cheek.

LOC: Patient responds to loud verbal stimuli with moaning. He won't open his eyes or follow commands.

CHIEF COMPLAINT: Patient only moans.

AIRWAY: Open.

BREATHING: Respirations are somewhat fast and labored.

CIRCULATION: Radial pulses are weak and irregular.

HEAD, FACE, NECK: There is a very small laceration to the patient's right cheek area, with no obvious deformity. There is no obvious deformity, spasm, or tenderness of the neck. Trachea is midline. +JVD

EMT-PARAMEDIC AND BEYOND

CHEST:	No obvious signs of trauma. Breath sounds are wet with diffuse rales and rhonchi bilaterally. Long scar noted down center of chest from suprasternal notch about 8 inches down.
ABDOMEN:	No obvious signs of trauma.
PELVIS:	No obvious signs of trauma. Pelvis stable.
LEGS:	No obvious signs of trauma. +PM S
BACK:	Spine clear of deformity of tenderness.
UPPER EXTREMITIES:	No obvious signs of trauma. +PMS.
GCS:	4
VITAL SIGNS:	BP: 90/60, P 132 and weak and irregular, R: 38 and labored. O2 sat 86%. ECG Sinus tach with multifocal PVC's and runs of Vtach – there is also a noticeable ST segment depression
SAMPLE:	Patient is wearing a medic alert tag that states he is a cardiac patient and is allergic to HCTZ.
BLOOD GLUCOSE:	150 mg/dcL
HEAD TO TOE:	All is still the same except the breath sounds are more congested and the patient's breathing is more labored
VITAL SIGNS:	BP: 112/80, P 140 and still irregular, R:42 and labored. O2 sat 87%. ECG still the same.
GOALS:	Immediate recognition that this trauma patient may have other complicating factors. Immediate identification for need for rapid extrication with full spinal restriction and administration of O2 with BVM. Intubation early. Recognition of AMI. IV therapy. Potential need for consultation with MC concerning use of ASA, vasodilators and diuretics in this trauma patient.