ATLS Practice Test 8

Answers & Explanations

1. A resuscitation team fails to recognize worsening shock because each member is focused only on their specific task. What best describes this failure?
   a. Task fixation due to cognitive overload
   b. Poor leadership delegation
   c. Inadequate resource allocation
   d. Lack of structured briefing
   e. Failure of situational awareness

   e.
   This is situational awareness failure. ATLS emphasizes continuous reassessment and global awareness beyond one's own task. The team leader is primarily responsible for situational awareness and, ideally, should not have any other tasks in addition to leading the team.

2. A 17-year-old male with severe TBI (GCS 5, fixed left pupil) arrives at a rural emergency department. Intubation is successful, and vital signs are stable on ventilator support. CT scan confirms a large subdural hematoma. The nearest neurosurgical facility is 4 hours away. Which of the following is the priority during transfer preparation?
   a. Hyperventilate to $PaCO_2$ <25 mmHg before transfer
   b. Ensure sedation and paralysis for transport
   c. Insert an ICP monitor to guide resuscitation
   d. Administer mannitol or hypertonic saline as indicated
   e. Delay transfer to place arterial and central venous lines

   d.
   Mannitol or hypertonic saline reduces ICP temporarily and is a recommended temporizing measure during prolonged transfer to definitive neurosurgical care. Prolonged hyperventilation is harmful since it may cause ischemic CNS events; only brief rescue hyperventilation is recommended for impending herniation. Sedation and paralysis prevents proper neurological examination and doesn't address ICP; not the priority compared to osmotic therapy. Insertion of an ICP monitor requires neurosurgical expertise and equipment not available here. Delaying transfer for insertion of invasive lines is against ATLS principles – Lines are not worth delaying transfer; IV/IO access is adequate.

3. A 35-year-old construction worker falls 6 meters. He has bilateral calcaneal fractures. What additional injury should be suspected?
   a. Cervical spine fracture
   b. Thoracic aortic injury
   c. Lumbar spine fracture
   d. Pelvic fracture
   e. Liver rupture

c.
Bilateral calcaneal fractures are strongly associated with *axial load injuries,* like lumbar spine fracture ("lover's fracture pattern"). Always evaluate the entire spine in this context. Cervical spine injuries occur with head/neck trauma, and are not classically linked to calcaneal fractures. Thoracic aortic injury is associated with high-speed deceleration, not axial loading through the feet. Pelvic fracture is also less common in this context. Liver rupture is more related to blunt abdominal trauma.

4. A 37-year-old man after blunt trauma has a GCS of 7. Which statement is most accurate?
   a. Definitive airway control is indicated
   b. Intubation should be delayed until CT scan is complete
   c. Only supplemental O_2 is required
   d. Observation with serial neurological checks is appropriate
   e. Hyperventilation is the first-line of therapy

a.
For GCS ≤ 8, airway protection is needed. Never delay airway for imaging. Only oxygen administration and observation is entirely insufficient. Hyperventilation is a temporizing measure for impending herniation, not first-line.

5. A 29-year-old man presents after a stab wound to the left chest. He is tachycardic and hypotensive. Chest tube is placed, draining 1,600 mL of blood immediately. What is the most appropriate next step?
   a. Continue tube thoracostomy and observe output
   b. Autotransfuse the blood and continue resuscitation
   c. Urgent thoracotomy
   d. CT scan of the chest
   e. eFAST examination of the chest and abdomen

c.
>1,500 mL immediately or >200 mL/hr x 2–4 hrs → urgent thoracotomy. He is too unstable to undergo a CT scan. e.FAST would only further delay surgery. Autotransfusion is adjunctive only.

6. A 70-year-old man presents after a fall with rib fractures. He is on chronic opioids for back pain. After initial resuscitation, he is hypoventilating with hypoxemia. What is the most important next management priority?
   a. Intubate immediately and transfer to ICU
   b. Optimize multimodal pain control to facilitate pulmonary toilet
   c. Start high-dose opioids to control pain
   d. Administer prophylactic antibiotics for pneumonia prevention
   e. Discharge if he maintains oxygen saturation >90% on room air

   b.
   Hypoventilation leads to stasis and atelectasis, which predisposes to infection, i.e. pneumonia. To prevent hypoventilation, effective pain control is necessary. However, this patient probably has a tolerance for opioids, so other modes of analgesia should be used, such as epidural injection, intercostal nerve blocks, acetaminophen, and NSAIDs (if not contraindicated) — elderly people need balanced pain strategies. Intubation may be necessary if deterioration continues, but the initial step is aggressive pain control. High-dose opioids would worsen hypoventilation, and also risk delirium. Prophylactic antibiotics are not indicated. If infection develops, then they should be used. Discharge is inappropriate, since older adults with rib fractures are at high risk for pneumonia and mortality, even if saturating well.

7. A 76-year-old woman presents with head trauma after a ground-level fall. She is alert and has no focal neurological deficits. She is on apixaban for atrial fibrillation. CT shows a small subdural hematoma. What is the next best step?
   a. Discharge home with close family observation
   b. Admit for observation and initiate anticoagulant reversal
   c. Repeat CT scan in 24 hours without admission
   d. Begin prophylactic hyperventilation to lower ICP
   e. Schedule elective neurosurgical follow-up in 2 weeks

   b.
   Anticoagulant reversal and serial neurological checks are essential. Discharge is inappropriate, since even small bleeds in the elderly on anticoagulants can expand. CT in 24 hours without admission is dangerous. Likewise for elective neurosurgical follow-up in 2 weeks. Hyperventilation is not indicated (yet) in this context.

8. Which of the following best reflects adequate resuscitation in trauma patients?
   a. Return of normal urine output (>0.5 mL/kg/hr)
   b. Normal blood pressure
   c. Resolution of tachycardia
   d. Normal hematocrit
   e. Normal ketones

a.
Urine output is reliable indicator of organ perfusion. The other choices can be misleading pitfalls or are not helpful.

9. A 45-year-old woman sustains burns to her entire right arm and entire back. Using the Rule of Nines, what is the %TBSA burned?
   a. 9%
   b. 18%
   c. 27%
   d. 36%
   e. 45%

c.
Entire back = 18%
Entire arm = 9%
Total = 27%

10. A 27-year-old woman is brought to the ED after multiple gunshot wounds to the abdomen. She is unresponsive, pulseless, with organized electrical activity on the monitor. CPR is ongoing. Which intervention is most appropriate?
   a. Massive transfusion protocol and REBOA
   b. Emergency department thoracotomy
   c. Bilateral chest tube placement
   d. Immediate intubation and mechanical ventilation
   e. Laparotomy in the operating room

b.
Emergency department thoracotomy is indicated in penetrating torso trauma with witnessed signs of life or organized cardiac electrical activity. This may allow heart massage and cross-clamping of the aorta to control exsanguination. REBOA requires circulation and the patient is pulseless, so this is not an option. Bilateral chest tubes may be indicated for cardiac arrest in blunt trauma, not penetrating abdominal trauma with exsanguination. Airway control has lower priority than controlling exsanguination (xABCDE). This patient must be stabilized first via emergency department thoracotomy before contemplating laparotomy.

11. A 27-year-old man is struck by a vehicle. On arrival, he is unresponsive (GCS 6), RR 10, pulse 130, BP 80/50, SpO_2 88%. There is active bleeding from a thigh wound. What is the first priority action in this patient?
   a. Apply a pelvic binder
   b. Rapid sequence intubation with in-line stabilization
   c. Control external hemorrhage with direct pressure and possibly a tourniquet
   d. Establish two large-bore IVs and initiate balanced transfusion
   e. Insert a chest tube to prevent tension pneumothorax

c.
Following xABCDE, the first priority is to control external hemorrhage. Then rapid sequence intubation with in-line stabilization and ventilation, then two large-bore IVs and balanced transfusion. There is no evidence of chest injury or pelvic fracture.

12. A 45-year-old woman is brought in after a rollover MVC. She is obtunded, has snoring respirations, SpO_2 84% despite jaw thrust, HR 120, BP 90/60. What is the next best step?
    a. Insert a nasopharyngeal airway
    b. Perform rapid sequence intubation with in-line cervical stabilization
    c. Obtain CT of the head before intubation
    d. Insert an oropharyngeal airway and observe
    e. Administer high-flow nasal oxygen and reassess in 5 minutes

b.
Her airway is threatened (snoring, low SpO_2, obtundation). Definitive airway with cervical protection is the priority. A basilar skull fracture is possible, so an NPA is contraindicated. Inserting an oropharyngeal airway and observing is insufficient in an obtunded patient, as is administering high-flow nasal oxygen and reassessing in 5 minutes. CT of the head has less priority than intubation.

13. A 70-year-old woman falls and sustains a displaced femoral neck fracture. She is alert and vital signs are stable. Which complication is most concerning if definitive repair is delayed?
    a. Fat embolism
    b. Deep venous thrombosis (DVT)
    c. Avascular necrosis of femoral head
    d. Infection
    e. Pulmonary contusion

c.
Displaced femoral neck fractures disrupt blood supply → risk of avascular necrosis. Early surgical fixation or replacement reduces risk. Fat embolism is more associated with long bone shaft fractures. DVT risk is real, but not as concerning as avascular necrosis.

14. Which of the following is the most effective way to prevent hypothermia in a severely injured trauma patient during resuscitation?
    a. Warming the trauma bay to ≥26°C (80°F)
    b. Covering the patient with multiple blankets
    c. Administering warmed IV crystalloids and blood
    d. Using radiant heat lamps
    e. Placing the patient in a heated water bath

c.
The largest cause of heat loss in trauma resuscitation is infusion of cold IV fluids and blood. Warmed infusions are the most effective way to prevent hypothermia. Room warming is essential, but less impactful than warmed IV fluids. Blankets help reduce heat loss, but are not sufficient alone. Radiant heat is adjunctive, not primary. Immersion is impractical.

15. A trauma patient has a GCS of 15, but reports numbness and weakness in both legs. What is the best next step?
    a. Immediate CT head
    b. High-dose steroids
    c. Immediate CT or MRI of the spine
    d. Observation only
    e. Rapid sequence intubation

c.
In a stable patient, a focal neurological deficit indicating SCI necessitates urgent spinal imaging. A head CT is not priority unless there are head symptoms. Steroids are no longer recommended in SCI. There is no airway issue here.

16. While waiting for blood products, you decide to give 500 mL of crystalloid to a patient in hypovolemic shock. Which of the following is most suitable?
    a. 0.9% Normal saline
    b. Lactated Ringer's
    c. Dextrose 5%
    d. Hypertonic saline 7.5%
    e. Hydroxyethyl starch

b.
Either NS or LR are acceptable, but LR is preferred for large-volumes due to less hyperchloremic acidosis. Dextrose solutions are contraindicated because they would worsen cerebral edema. Hypertonic saline is indicated for increased ICP, not hypovolemic shock. Hydroxyethyl starch is not recommended due to its association with increased risks of acute kidney injury, death, and other adverse events.

17. Which trauma patient should not undergo permissive hypotension?
    a. 25-year-old with stab wound to abdomen
    b. 40-year-old with unstable pelvic fracture
    c. 60-year-old with blunt abdominal trauma
    d. 30-year-old with penetrating chest wound
    e. 35-year-old with severe TBI and GCS 6

e.
A patient with TBI should not have cerebral perfusion decreased. Therefore, SBP must be kept ≥100 mmHg, or MAP ≥80 mmHg. Permissive hypotension is acceptable in the other choices.

18. In uncontrolled hemorrhage, what is the most appropriate target systolic BP prior to definitive hemorrhage control?
    a. >140 mmHg
    b. >120 mmHg
    c. >100 mmHg
    d. 80–90 mmHg
    e. As high as tolerated to improve renal perfusion

d.
Permissive hypotension: maintain sBP between 80–90 mmHg until bleeding controlled (except in TBI). Higher BP disrupts clots → ↑ bleeding.

19. A 36-year-old male construction worker is brought after a crush injury. He is oliguric, has dark urine, and ECG shows peaked T waves. What is the most important immediate treatment?
    a. Hemodialysis
    b. Generous volumes normal saline infusion
    c. IV calcium gluconate and insulin/glucose
    d. Loop diuretics to increase urine output
    e. Surgical fasciotomy

c.
Crush injury causes rhabdomyolysis → release of K^+ into intravascular space → hyperkalemia → peaked T waves. IV calcium stabilizes cardiac muscle cell membranes. Insulin with glucose IV drives K^+ into cells → lowering plasma K^+. Dialysis is definitive if hyperkalemia is persistent, but initial management is stabilization. Generous volumes of normal saline help prevent myoglobin-induced nephropathy, not acute hyperkalemia. Loop diuretics do not acutely correct hyperkalemia. Fasciotomy is for compartment syndrome, not acute hyperkalemia.

20. What is the most common cause of persistent hypotension during or after resuscitation in blunt trauma?
    a. Myocardial infarction
    b. Ongoing hemorrhage
    c. Cardiac contusion
    d. Cardiac tamponade
    e. Pulmonary embolism

b.
Uncontrolled hemorrhage is the most common. It must be assumed until proven otherwise.

21. A trauma patient with shock receives multiple units of stored PRBCs. He develops tetany and refractory hypotension. Which electrolyte abnormality is most likely?
    a. Hypocalcemia
    b. Hyperkalemia
    c. Hyponatremia
    d. Hypomagnesemia
    e. Hyperphosphatemia

a.
Citrate is added to banked blood to act as an anticoagulant by chelating ionized calcium. This binding prevents calcium from participating in the coagulation cascade, thereby stopping stored blood products from clotting. If a patient receives massive volumes of blood, the infused citrate can overwhelm the liver's ability to metabolize it, leading to citrate toxicity, which includes hypocalcemia, impaired coagulation, hypotension, and other complications. Severe hypocalcemia makes nerves more excitable, leading to tetany and seizures.

22. A 24-year-old man is brought in after a high-speed motor vehicle crash. He is tachypneic (RR 36), has tracheal deviation to the left, absent breath sounds on the right, jugular venous distention, and oxygen saturation of 82% despite 15 L/min oxygen via non-rebreather. What is the most appropriate next step?
    a. Obtain a chest X-ray
    b. Insert an 18-gauge needle into the right 2nd intercostal space, midclavicular line
    c. Insert a large-bore chest tube into the right 5th intercostal space, anterior to mid-axillary line
    d. Perform pericardiocentesis
    e. Initiate rapid sequence intubation

c.
He has a right tension pneumothorax. A large-bore (e.g. 14-gauge) catheter or needle should be inserted into the right 5th intercostal space, anterior to mid-axillary line *immediately*. In ATLS, the safer lateral approach is preferred to the anterior approach. After successful decompression, a subsequent chest tube thoracostomy is required to fully restore lung expansion and prevent recurrence. If immediate *definitive chest tube* placement can be done right at the start then this is preferred. Waiting for imaging delays life-saving treatment in tension pneumothorax, which is a *clinical diagnosis*. He does not have signs of cardiac tamponade. Intubation first is incorrect because positive pressure ventilation would worsen the tension pneumothorax.

23. A 50-year-old motorcyclist is brought in after a crash. He is in severe respiratory distress with extensive subcutaneous emphysema of the chest and neck. Breath sounds are absent bilaterally. Chest X-ray shows multiple misplaced NG tubes and trachea displaced. Which is the most likely diagnosis?
    a. Bilateral hemothorax
    b. Massive hemopneumothorax
    c. Tracheobronchial injury
    d. Bilateral tension pneumothorax
    e. Flail chest

    c.
    The hallmark of tracheobronchial injury is massive subcutaneous emphysema, difficulty ventilating, persistent pneumothorax, air leakage in chest tubes, and NG tube malposition. Bilateral hemothorax would cause dullness to percussion, not subcutaneous emphysema and air leak. Bilateral tension pneumothorax may cause subcutaneous emphysema, but the findings of misdirected tubes and massive surgical emphysema point strongly to airway disruption. Flail chest would present with paradoxical motion rather than massive subcutaneous emphysema.

24. A 19-year-old man sustains multiple stab wounds. He is unresponsive, BP 60/40, HR 150. FAST is positive for pericardial fluid. What is the most appropriate next step?
    a. Initiate massive transfusion protocol and transfer to OR
    b. Perform pericardiocentesis under ultrasound guidance
    c. Perform emergency department thoracotomy
    d. Place bilateral chest tubes
    e. Give 2 liters warmed crystalloid and reassess

    c.
    Emergency department thoracotomy is indicated in penetrating chest trauma with shock or arrest, and pericardial tamponade. MTP + OR transfer is too slow. The patient is in extremis, so requires immediate intervention. Pericardiocentesis is not sufficient for penetrating trauma with tamponade. Chest tubes would not alleviate tamponade. Administering crystalloid delays definitive intervention and risks dilutional coagulopathy.

25. An 82-year-old man falls from standing height. He is alert, BP 110/70, HR 84 on arrival. He is on metoprolol and warfarin. FAST shows free fluid in the abdomen. What is the most appropriate immediate next step?
    a. Discharge if he remains hemodynamically stable
    b. Reverse anticoagulation and arrange urgent surgical or interventional radiology consultation
    c. Abdominal CT with IV contrast
    d. Administer 2 L crystalloid before deciding on further care
    e. Repeat FAST in 30 minutes to confirm intra-abdominal injury

b.
Even minor trauma in older adults on anticoagulation with positive FAST requires urgent intervention. .Anticoagulant reversal is a priority. Elderly patients bleed more easily and compensate poorly. Surgical or interventional radiology evaluation must be immediate. Beta-blockers may mask tachycardia making assessment of hemodynamic stability difficult. CT may be done later, but anticoagulant reversal and surgical activation should not be delayed. ATLS discourages large volumes of crystalloids; blood + hemostasis are priorities. Repeating FAST in 30 minutes is incorrect - waiting delays care.

26. A 28-year-old woman at 32 weeks gestation is struck by a car. She is alert, HR 128, BP 84/52, RR 28, pale and diaphoretic. What is the most appropriate immediate management priority?
    a. Initiate perimortem cesarean section if fetal heart tones are absent
    b. Give 2 L bolus of crystalloid then cross-matched blood transfusions as needed
    c. Aggressively resuscitate the mother with blood products and control hemorrhage
    d. Obtain urgent obstetric ultrasound for fetal viability
    e. Place the patient supine to optimize maternal venous return

c.
Maternal survival is the best predictor of fetal survival; therefore, treat hemorrhagic shock with aggressive balanced resuscitation. Simultaneously, position her in left lateral tilt or manually displace the uterus to the left, since being supine compresses the IVC. Fetal US is a secondary priority. Perimortem cesarean section indicated only if maternal cardiac arrest persists >4 minutes. She has not arrested. ATLS emphasizes blood early and minimal crystalloid.

27. A 31-year-old soldier sustains a blast injury with traumatic amputation of the left leg. Massive bleeding is noted. What is the first priority for hemorrhage control in this setting?
    a. High tourniquet placement above the amputation site
    b. Direct pressure followed by wound packing
    c. Clamping of bleeding vessels with hemostats
    d. Surgical ligation of the femoral artery in the field
    e. Compression bandage

a.
Tourniquets placed high and tight are lifesaving in combat trauma. Clamping of bleeding vessels or surgical ligation of the femoral artery are not feasible in austere settings. Direct pressure and packing may work for wounds not on the extremities, but amputations need tourniquets. Compression bandages are insufficient for major arterial hemorrhage.

28. Which is the earliest indicator of hypovolemic shock?
    a. Hypotension
    b. Restlessness and anxiety
    c. Oliguria
    d. Tachypnea
    e. Narrowed pulse pressure

b.
Restlessness and anxiety as a result of cerebral hypoperfusion. The other signs come later. Hypotension is a late sign.

29. A 27-year-old man with an isolated femoral shaft fracture suddenly develops acute respiratory distress, confusion, and a petechial rash on his chest and axillae 24 hours post-injury. Which is the most likely diagnosis?
    a. Fat embolism syndrome
    b. Pulmonary embolism
    c. Tension pneumothorax
    d. Sepsis from wound infection
    e. Myocardial contusion

a.
Fat embolism syndrome has the classic triad of hypoxemia, neurologic changes, and petechial rash after a long bone fracture. Pulmonary embolism causes dyspnea but not petechiae or confusion. Tension pneumothorax causes hemodynamic collapse and absent breath sounds, but not petechiae. Sepsis manifests as fever and shock, but not the above petechial rash. Myocardial contusion may cause arrhythmia and chest pain, but not petechiae or neurologic features.

30. A 60-year-old fisherman is rescued from icy water after 45 minutes. Core temperature is 29°C. He is bradycardic, hypotensive, and confused. What is the most appropriate rewarming method?
    a. Passive external rewarming only
    b. Active external rewarming with blankets and forced warm air
    c. Active core rewarming with warmed IV fluids and heated oxygen via nasal cannulae
    d. Immersion in a hot water bath
    e. Cardiopulmonary bypass

c.
Moderate hypothermia (28–32°C) requires active core rewarming (warmed IV fluids and warm humidified O_2). Hot water immersion risks arrhythmias in such patients. For mild hypothermia (>32°C), only passive external rewarming is needed. Cardiopulmonary bypass is reserved for refractory severe hypothermia (<28°C) or cardiac arrest.

31. Which patient requires urgent neurosurgical consultation?
    a. GCS 15, small scalp laceration
    b. GCS 13, normal CT head
    c. GCS 15, nondisplaced linear skull fracture
    d. GCS 8, epidural hematoma on CT
    e. GCS 14, mild concussion

d.
An epidural hematoma with low GCS is a surgical emergency. The other scenarios are not.

32. What is the most appropriate use of tranexamic acid (TXA) in trauma?
    a. Routine administration >3 hours after injury
    b. IV bolus followed by infusion within 3 hours of injury
    c. Nebulized administration for thoracic trauma
    d. Only for TBI
    e. Only after laboratory confirmation of coagulopathy

    b.
    TXA within 3 hours reduces bleeding mortality. After 3 hours it increases bleeding mortality. Do not wait for labs.

33. A 22-year-old construction worker sustains a splash injury to the right eye from wet cement. He presents with severe pain and blurred vision. What is the first management step?
    a. Instill topical antibiotic drops
    b. Apply a pressure patch
    c. Immediate copious irrigation with isotonic fluid
    d. Place a rigid eye shield and urgent ophthalmology referral
    e. Give systemic corticosteroids

    c.
    Wet concrete is very alkaline. As with any chemical injury to the eye, immediate copious irrigation is essential. You cannot over-irrigate, but, in this case, it should be continued at least until the pH of the tears normalizes. Time is critical. Antibiotics and/or corticosteroids is secondary. A pressure patch is contraindicated in chemical burns.

34. A 23-year-old man sustains a gunshot wound to the abdomen. He arrives hypotensive, with a distended abdomen, and is unresponsive. What is the next best step?
    a. FAST examination
    b. Immediate CT scan of the abdomen
    c. Resuscitative thoracotomy with aortic cross-clamp
    d. Direct transfer to the operating room for laparotomy
    e. Diagnostic peritoneal lavage

    d.
    In an unstable patient with penetrating abdominal trauma, emergent laparotomy is indicated. Diagnostic studies, such as FAST, DPL, and CT, do not change management or would delay life-saving surgery. Thoracotomy with aortic cross-clamp may be considered if the patient arrested in the emergency department.

35. During disclosure of a young woman's death from a motor vehicle crash, her partner collapses, sobbing uncontrollably. What should the physician do first?
    a. Continue explaining medical details to avoid leaving gaps
    b. Pause, allow silence, and offer supportive presence
    c. Quickly redirect attention to organ donation discussions
    d. Ask security to escort the grieving partner out of the room
    e. Switch the conversation to the partner's own health

    b.
    Appropriate silence, presence, and empathy are core to communication. Choice a. overwhelms and fails to acknowledge grief. Choice c. in not appropriate - discussion about donation should never be immediate and should come some time after grief acknowledgement. Choice d. is certainly wrong, unless violence or threat of it, occurs. Choice e. deflects and is dismissive.

36. A 29-year-old woman, 36 weeks pregnant, is brought in after a fall. She is tachycardic and hypotensive. Despite appropriate resuscitation efforts, she deteriorates and goes into cardiac arrest. Resuscitation efforts continue for 5 minutes without ROSC. What is the next best step?
    a. Terminate resuscitation as survival is unlikely after 4 minutes
    b. Perform emergent perimortem cesarean delivery
    c. Administer additional blood
    d. Start induction of labor
    e. Begin therapeutic hypothermia protocol

    b.
    If maternal arrest persists >4 min, immediate resuscitative cesarean improves maternal and fetal survival. After this has been attempted and failed then resuscitation may be terminated. Therapeutic hypothermia protocol is not applicable in this scenario.

37. A 42-year-old man is shot in the left lower chest, just below the nipple. He is stable on arrival. FAST shows free fluid in the upper abdomen. What is the most important next step?
    a. CT scan of the chest and abdomen with IV contrast
    b. Chest tube insertion and observation
    c. Diagnostic peritoneal lavage
    d. Exploratory laparotomy
    e. Observation with serial physical examinations

    a.
    Thoracoabdominal wounds may traverse the diaphragm. CT with IV contrast would define the injury. Chest tube insertion and observation is insufficient for suspected intra-abdominal injury. Exploratory laparotomy is reserved for instability or peritonitis, not stable patients. Observation only is insufficient.

38. A 28-year-old man is brought to the ED after a motor vehicle crash. He opens his eyes to pain, makes incomprehensible sounds, and has abnormal flexion. His GCS score is:
    a. 6
    b. 7
    c. 8
    d. 9
    e. 10

    b.
    Eyes (to pain) = 2
    Verbal (incomprehensible sounds) = 2
    Motor (abnormal flexion [decorticate posture]) = 3
    Total = 2 + 2 + 3 = 7

39. A 29-year-old man presents after being stabbed in the right upper quadrant. He is alert, normotensive, and has localized abdominal tenderness without peritonitis. What is the most appropriate next step?
    a. Immediate laparotomy
    b.Focused abdominal sonography for trauma (FAST)
    c.Diagnostic peritoneal lavage (DPL)
    d.Local wound exploration in the emergency department
    e.Serial physical examinations and observation

    b.
    He is hemodynamically stable and has equivocal physical examination findings. FAST to determine if there is intra-abdominal bleeding is first-line. DPL is an older test and is less favored than FAST. Immediate laparotomy is indicated only with peritonitis, evisceration, or positive FAST with shock.

40. Which of the following patients should be triaged as Immediate (Red tag) during a mass casualty incident?
    a. 20-year-old with isolated open tibia fracture, alert, normal respirations
    b. 50-year-old with severe chest pain
    c. 40-year-old with RR 36, capillary refill >2 seconds, following commands
    d. 70-year-old with no respirations even after airway repositioning
    e. 8-year-old walking with minor abrasions

    c.
    Immediate care (Red tag) patients are those who are breathing and have any of the following conditions: respiratory rate greater than 30 per minute, radial pulse is absent, capillary refill is over 2 seconds, unable to follow simple commands. Only c. meets these criteria. Incidentally, a. and b. are delayed (yellow), d. is dead (black), and e. is minimal (green).