Chapter 9

1. What additional spinal precautions does this patient require?
   Application of a cervical collar, firm immobilization of the trunk to the spine board, then head immobilization to the spine board using the CID. Immobilize him firmly enough to permit board rotation without patient movement if he vomits.

2. What mechanism of injury do you suspect?
   Axial loading and flexion from a shallow water dive.

3. What other assessment and care steps does this patient require?
   Assessment: motor and sensory assessment of the distal extremities, isolate dermatomes/myotomes, palpate the posterior neck for tenderness and deformity. Also examine for the signs of neurogenic shock—bradycardia, hypotension, warm and dry lower body, and cool and clammy upper body. Care: ABCs, oxygen, maintenance of patient's body temperature.

Chapter 10

1. Considering the mechanism of injury and what is known about the patient, what thoracic pathophysiology may explain the patient's presentation?
   The patient has suffered blunt anterior chest trauma and sudden deceleration injury. He has evidence of a flail chest and subcutaneous emphysema of the anterior and lateral left chest suggests a left pneumothorax. In addition, the patient is hypotensive and has JVD. It is also very probable that the patient has pulmonary contusion under the flail segment. Further assessment should rule out possible complications including left tension pneumothorax, pericardial tamponade, great vessel injury, esophageal or tracheobronchial rupture, and left diaphragmatic rupture with abdominal viscer herniation.

2. As the treating paramedic, what is your next step in stabilizing this patient?
   An endotracheal tube is indicated as the patient is unconscious and without gag reflex. This will permit intermittent positive pressure ventilation (with supplemental oxygen) and provide effective internal splinting of the flail segment. Also firmly tape a bulky dressing over the flail segment to restrict its movement.

3. What further emergency treatment is likely indicated in the absence of breath sounds on the left side and a relatively normal abdominal exam?
   This information strongly suggests the possibility of a left tension pneumothorax. Despite care instituted, the patient still demonstrates hypotension and JVD. The normal abdominal exam makes significant diaphragmatic hernia unlikely. Pleural decompression of the left chest is indicated using a large bore IV catheter inserted in the second intercostal space, midclavicular line.

Chapter 11

1. Given the signs and symptoms, what is the most likely injury and why?
   The spleen is frequently injured in left-sided abdominal trauma, especially trauma to the left flank. It often presents with limited signs and symptoms, and blood loss in the supine patient frequently results in diaphragm irritation and referred pain. Blunt trauma may also induce kidney injury.

2. What relation does the right shoulder pain have to the suspected injury?
   Shoulder pain is often a referred pain from the abdomen caused by blood irritating the diaphragm.

3. What care will you provide for this patient?
   Gentle, rapid transport to the trauma center with aggressive fluid resuscitation initiated en route. Apply high-flow, high-concentration oxygen, ready the PASG, and constantly monitor for the appearance of the signs and symptoms of shock.