

# Paramedic case study

Business



April The major traumatic Injuries that this patient may experience would be possible pelvic fractures, a lateral compression fracture, anterior posterior fracture (open book), or vertical shear fracture. Also combine would be hypothalamic shock and a pneumonia which could possibly develop into a possible tension pneumonia. The bony pelvis consists of the Ilium (iliac wings), schism, and pubis, which form an anatomic ring with the sacrum. Disruption of this ring requires significant energy.

Because of the forces involved, pelvic fractures frequently involve injury to organs contained within the bony pelvis.

In addition, trauma to extra-pelvic organs is common. Pelvic fractures are often associated with severe hemorrhage due to the extensive blood supply to the region (Cooperates & Bandits, 2009). Pelvic fractures are most commonly described using one of two classification systems. The Tile classification system is based on the Integrity of the posterior sacroiliac complex (Sutton & Hall, 2011). In type A Injuries, the sacroiliac complex is intact. The Elvin ring has a stable fracture that can be managed non operatively.

\* Type B injuries are caused by either external or internal rotational forces resulting in partial disruption of the posterior sacroiliac complex. These are often unstable. \* Type C injuries are characterized by complete disruption of the posterior sacroiliac complex and are both rotationally and vertically unstable. These injuries are the result of great force, usually from a motor vehicle crash, fall from a height, or severe compression.

The Young classification system is based on mechanism of injury: extension compression, anterior posterior compression, vertical shear, or a combination of forces.

Lateral compression (LLC) fractures involve transverse fractures of the pubic ramus, either Epistolar or controllable to a posterior injury (Sutton & Hall, 2011). \* Grade I – Associated sacral compression on side of impact Grade II – Associated posterior iliac (“crescent”) fracture on side of impact \* Grade III Associated controllable sacroiliac joint injury Anterior-posterior compression (APPC) fractures, involve symphyseal diastase or longitudinal ramus fractures. Grade I – Associated diastase (slight) of pubic symphysis or of the anterior sacroiliac (SSL) joint, while anterior, transverse, and posterior SSL ligaments remain intact \* Grade II – Associated widening of the anterior SSL joint caused by disruption of the anterior SSL, transverse, and transverse ligaments; posterior SSL ligaments remain intact \* Grade III (open book) – Complete SSL joint disruption with lateral displacement and disrupted anterior SSL, transverse, transverse, and posterior SSL ligaments.

Vertical shear (VS.) involves symphyseal diastase or vertical displacement anteriorly or posteriorly, which is usually through the SSL joint, though occasionally through the iliac wing or sacrum.

Acetabular fractures most commonly involve disruption of the acetabular socket when the hip is driven backward in a motor vehicle accident.

Occasionally, they occur in a pedestrian struck by a vehicle moving at a high rate of speed. Falls in elderly persons may involve fractures (usually of the pubic ramus) without disruption of the ring (Sanders, 2010).

Implications that can lead from abdominal and pelvic injuries are things like Hypoglycemic shock. Hypoglycemic shock offers to a medical or surgical condition in which rapid fluid loss results in multiple organ failure due to inadequate circulating volume and subsequent inadequate perfusion.

Most often, hypoglycemic shock is secondary to rapid blood loss (hemorrhagic shock). ( Menace & Whether, 2009). Acute external blood loss secondary to penetrating trauma and severe GIG bleeding disorders are 2 common causes of hemorrhagic shock.

Hemorrhagic shock can also result from significant acute internal blood loss into the thoracic and abdominal cavities (Curtis & Ramadan, 2011).

Pneumonia is defined as the presence of air or gas in the pleural avidity (e, the potential space between the visceral and parietal pleura of the lung). The clinical results are dependent on the degree of collapse of the lung on the affected side.

Pneumonia can impair oxygenation and/or ventilation.

If the pneumonia is significant, it can cause a shift of the medications and compromise hemorrhagic stability (Maries & Hone, 2010). Traumatic pneumonia results from blunt trauma or penetrating trauma that disrupts the parietal or visceral pleura Management steps for traumatic pneumatics's are similar to those for other, maturation causes. If hemorrhagic or respiratory status is compromised or an open (communicating to the atmosphere) and/or hemorrhoid are also present, tube tracheotomy is performed to evacuate air and allow re-expansion of the lung.

A tension pneumonia is a life-threatening condition characterized by an accumulation of air under pressure in the plural space but prohibiting any outflow, collapsing the lung and causing hypoxia's as well as obstructive shock (Sanders, 2012).

Prompt recognition of this condition is lifesaving, both outside the hospital and in a modern CICS. Because tension pneumonia occurs infrequently and has a tangentially devastating outcome, a high index of suspicion and knowledge of basic emergency thoracic decompression procedures are important for all healthcare personnel.

Immediate decompression of the thorax is mandatory when tension pneumonia is suspected (Sanders, 2012). From the case study provided for this assignment and the patient vital signs, symptoms and mechanism of injury. I have drawn my conclusion that the patient is suffering from a lateral compression fracture with evidence of hemorrhagic compromise from the fall that was greater than 3 meters.

The appearance of the patient being described as pale and diaphragmatic, with n increasing pulse rate, and a decreasing blood pressure, tells me that this patient is losing blood volume internally and is in hypothalamic shock.

Also signs from a CACM contusion to the left axial and anterior chest wall with increasing respirations from 20 to 30 rasps after 10 minutes on scene lead me to believe that this patient is also suffering from a pneumonia (Queensland Ambulance Service, 2010). I got all these details from doing the primary survey which consists of Danger, Response, Circulation, Airway, Breathing and assessment of the scene. How I would manage his patient  
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would be to call for backup or as an CAP crew, consultation and approval from the AS on call medical officer required in all situations.

Because the seriousness of this condition and how fast an asymptomatic person can deteriorate alter TATS transport to a national or a scent decompression snouts De performer The pre hospital assessment would to be to count the respiratory rate and pattern.

Count for 1 minute and reassess at regular intervals as this will be the first indicator of deterioration of the patient. Movement of the chest wall. Are there any asymmetrical features of chest wall movement? Be vigilant for flail segments with paradoxical or abnormal movements of a section of chest wall.

Is there subtle reduced movement of one side of the chest wall with hyper expansion suggesting a tension pneumonia? Reduced movement may also be due to pain, pneumonia or hemorrhage. The patient should be assessed every 10 minutes or whenever there appears to be a change in the patients clinical status.

The interventions that I would take with this patient would be to follow the clinical practice guideline for treatment of hypotensive shock. Acute hemorrhage, secondary to trauma, is the major cause of hypotensive shock (Sanders, 2012).

Blood loss can be 'hidden' and not immediately apparent I. E. Pelvic injury. Awareness of clinical features of shock is of paramount importance, as early recognition of hypoglycemia can be life-saving.

Assessment of volume status extends beyond the vital signs and requires a comprehensive review of the patient. I would put the patient on high flow oxygen at 15 liters per minute on a non re breather mask (CAP, 2010). Cover the open wounds of the chest by using a 3 sided dressing. Stop any external hemorrhage by applying direct pressure.

I would then gain IV access and administer IV fluids, and IV analgesic whilst maintaining rhombohedra. If the pneumonia turned into a tension pneumonia, I would then re-evaluate the situation and the patient's clinical presentations, and if necessary follow the CPM guidelines to performing a decompression.

The management of my patient would also include pain management. Pain is individual and subjective and is influenced by factors such as culture, previous experiences, belief, mood, and ability to cope. There are therefore no clinical signs of pain.

There are 2 main types of pain management, Non pharmacological techniques such as reassurance, distraction, posturing, positioning, heat or cold therapy and splinting. Non pharmacological pain management such as GET, metaphorically, morphine, fentanyl, and astatine (Queensland Ambulance Service (DTV)). For my patient, if I had ICP backup I would administer astatine.

Astatine is an anesthetic agent that acts as an AMANDA receptor antagonist. At lower doses this drug produces significant analgesia, whilst the airway reflexes and respiratory drive are preserved.

Unlike other general anesthetics, there is minimal hemorrhagic compromise as astatine acts as a psychosomatic agent. The indications for this drug would be severe traumatic pain associated with fracture reduction and or splinting. After the patient is in as little pain as possible I would then move to the placement of a SAM pelvic splint. For the management of the pelvic injury I would place the patient in a SAM pelvic splint.

Pelvic binders reduce and stabilize pelvic ring fractures with diastase and thereby control hemorrhage from the pelvic vascular.