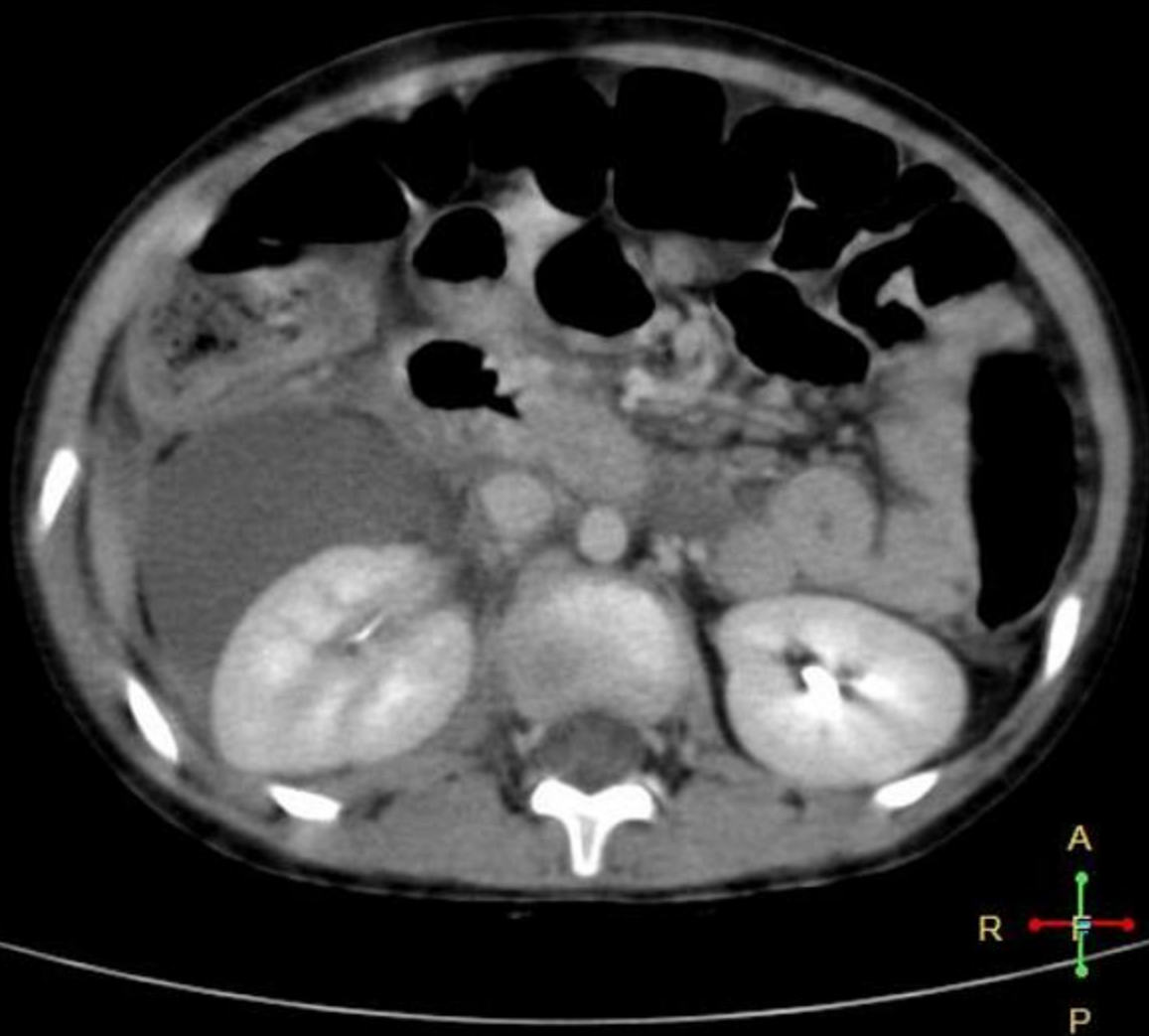




1. Lead examiner

Candidate Number:

2. Co-examiner

Final Mark:

SCENARIO

A 26 year-old man is brought to your major regional ED after a high-speed motorcycle accident. There is no external haemorrhage or apparent long bone fracture. He has a cervical collar in place and is complaining of pain in his back. The ambulance crew note that he has not been seen to move his legs. His initial observations are GCS 15; Pulse Rate 65/min; Blood Pressure 80/40 mmHg; Respiratory Rate 18/min; SaO₂ 100% on high-flow oxygen.

Question 1 Outline your initial approach.

(2.5 minutes)

Expected Response	Details & Comments	
Initial approach / Primary Survey	Trauma team response, surgical team in attendance. Assume leadership, delegate roles. MIST (Mechanism, Injury, Signs & Treatment) type handover concurrent with initial assessment/management Airway and Breathing: Appear currently not requiring urgent management. Circulation is major concern. Treat haemo/pneumothorax with ICC, pelvic binder if suitable pelvic fracture. 2 x large bore IV (bloods for Xmatch, FBE, UEG/LFT, blood alcohol, etc), analgesia IV aliquots Trauma imaging: trauma series Xrays: Chest/ pelvis, bedside FAST. Immediate primary survey, identify and control external haemorrhage, splint/ immobilise major fractures.	To pass: Structured EMST approach
Resuscitation	Begin resuscitation with warmed fluids (consider early use of blood products, avoid large volume crystalloid) If FAST +ve, significant, major external haemorrhage or clinical impression of haemorrhagic shock then use packed cells (Group O) and be prepared to initiate tranexamic acid & major transfusion protocol. Initiate 2 units packed cells. Consider damage control resuscitation end-points (SBP 70-80) as clinically indicated.	
Secondary Survey <i>Prompt: What neurological features would you look for on examination?</i>	Complete secondary survey. Assessment for spinal injury including log roll : Vasodilation/warm peripheries. Diaphragmatic breathing pattern. Motor and Sensory level (If spinal injury the cause of hypotension expect lesion above T4). Neurological deficit lower limbs/ upper limbs. PR for evidence of sacral sparing if incomplete. Priapism would suggest complete lesion.	
Past Medical history	AMPLE History	

Question 2: Examination reveals a sensory level above the patient's nipples. X rays of his chest and pelvis are non diagnostic. After 1L of intravenous Normal Saline his observations remain unchanged. What actions will you take whilst waiting for a CT scan in 15 minutes time?

(2 minutes)

Expected Response	Details & Comments	
Patient is hypotensive with a sensory level, suggesting that has major spinal injury above T4. This may be causing persistent hypotension, however need to ensure no concealed haemorrhage . Must exclude pelvis/chest/retroperitoneal haemorrhage.		
Monitoring & Supportive Care	Includes pressure area care, temperature control, ongoing non invasive monitoring, consideration of invasive monitoring, euglycaemia, ECG, IDC	
Analgesia	Titrated IV analgesia	
IV fluids	Give details of fluid administration with goals (MAP, urine output) – up to 1 litre per hour of N. Saline	
Immobilisation	Full spinal immobilisation.	
Notify family		
Prepare for transfer to CT	Transport monitor, appropriate staff, drugs	
e-FAST (serial)		

Question 3: A CT is performed. Interpret this single CT abdomen slice. (1 minute)

Expected response	Details and Comments	
Key finding: CT shows extensive retroperitoneal haemorrhage in region of R kidney which is not well seen ?major renal injury.		
Relevant negatives	Contrast scan so unable to comment re blush/ active bleeding. There is no intra-peritoneal free fluid, no liver laceration. No obvious spinal injury on this slice.	
Interpretation (prompt at 30 seconds for interpretation)	Significant "concealed" retroperitoneal haemorrhage due to R renal injury, likely contributing to hypotension. Need CT angiogram and may need embolization or laparotomy (nephrectomy) if active bleeding. Urgent General Surgery/ Urology/ Interventional Radiology review/planning.	

Question 4: The CT scan shows no apparent active bleeding. There is an unstable T4 fracture with signs of a cord injury. The patient has unchanged observations (PR 65, BP 80/40). What further actions would you take?

(1.5 minutes)

Expected Response	Details & Comments	
Injuries	Unstable T4 fracture with associated cord injury and neurogenic shock. R renal injury without active bleeding: Conservative management likely (though may still need surgical/ radiological intervention), needs close observation to detect any bleeding.	
Surgical/Urological consult (Renal/ Retroperitoneal bleed)	Possible need for surgery/intervention if further bleeding, Urological opinion.	
Haemodynamic support and monitoring <i>Prompt: How would you manage and monitor this patient's hemodynamics?</i>	Consider CVC, Noradrenaline infusion to maintain MAP above 70 to ensure adequate spinal perfusion and prevent secondary injury due to hypotension. Hourly UO. Arterial line, Challenging to detect blood loss in presence of neurogenic shock: Monitor UO, Acid Base status (lactate/base deficit), vasopressor needs, Hb.	
Spinal Injury Care/ Disposition <i>Prompt: What other specific care will the patient need</i>	Arrange transfer to Spinal Unit or equivalent for spinal fixation & spinal injury care, provided not requiring urgent surgery locally for retroperitoneal bleed. Will need spinal precautions, spinal care including temperature, NGT, appropriate transfer staff and equipment, antiemetics. Liaise with spinal unit re: steroids	
Communications	Inform patient and next of kin. Difficult task, given implications of injury. Sensitivity and tact required. Thorough documentation.	

Comments: (if you fail the candidate, please state why)

If the candidate fails the exam overall, what feedback would you suggest CIC provide for this SCE?

SCENARIO

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His initial observations are:

GCS:	15
Pulse Rate:	65/min
Blood Pressure:	80/40 mmHg
Respiratory Rate:	18/min
SaO2:	100% on high-flow oxygen