

A 70 year old man presents to A&E with severe L sided colicky abdominal and loin pain. It was of sudden onset and started 2 hours ago. He has no significant PMH but has been increasingly unwell over the last couple of months. He is currently on NSAIDs for neck pain and iron for anaemia., both of which have been started in the last few weeks. Over the past few days he noticed that he is having problems walking, upstairs in particular and his legs gave way a few times causing him to fall. He has also been c/o tingling sensation and numbness in his feet.

O/E he is slim, pale looking, you notice that he walks with a very careful gait even for someone in severe pain. Abdomen is soft but his left side is very tender, as is his loin. His UA shows blood +++, protein +++ no WCC no nitrites.

What is the most likely cause of his back pain, what should be your investigation of choice to investigate that? 2 points

Renal colic
CT KUB

What 3 simple blood tests would you perform in A&E to further investigate his other complaints and why? 6 points

FBC- looking for anaemia, thrombocytopenia and leukopenia

U&E- looking for signs of renal failure

Ca- looking for hypercalcaemia

You performed a C spine X-ray. What is the most significant abnormality? 1 point

What is the most likely diagnosis in this patient, linking all the above?

1 point



Lack of body of C3, Multiple Myeloma

Lumbar puncture

What are the 4 landmarks in performing the lumbar puncture? 2 points

2 pelvic bones and 2 spinous proceses- L4 and L5

What size needle would you use in an adult? 1 point

20 or 22

What are the normal values for SCF- pressure, glucose, protein, WCC 4 points

Pr- 80-200 mm

Gluc-

Prot- 15-40 mg/dl

WCC- 0-5

Name 3 contraindications to LP- 3 points

Coagulopathy

Raised intracranial pressure

Cellulitis/infection at the site of LP

Patient/carer refusal

Spine abnormalities

Meningitis

A 6 year old boy arrives in A&E with 4 hour H/O feeling unwell. He has a temperature, complaining of headache and does not like the light being on. You suspect he might have meningitis.

Name 2 signs which can be elicited on examination of pt which would suggest meningeal irritation and describe them. 2 points

Kernig Sign- flex knee to 90° followed by flexion of hip to 90° pain in hamstrings and resistance to knee extension is +ve

Babinski- flexion of neck leads to hip flexion

Nuchal rigidity- inability to passively flex the neck

In what percentage of patients with bacterial meningitis are these tests positive? 1 points

50%

Name 4 signs suggestive of CNS irritation- 2 points

Lethargy, seizure, focal neurological signs, raised fontanelle, irritability, confusion, reduced GCS, papilloedema, positioning eg decorticate, decerebrate, raised BP with bradycardia

What are the signs of early compensated shock? 3points

Tachycardia

Cool peripheries

Increased capillary refill > 3 or 4 sec

Tachypnea/ Sats <95%/hypoxia on ABGs

Base deficit > -5 mmol/l

Confusion/drowsiness/decrease conscious level

Poor urine output- <1ml/kg/h

Reduced pulse pressure

½ mark each

In a patient with no signs of raised intracranial pressure or shock what 2 drugs should you use in A&E to treat suspected meningitis? 2 points

Cefuroxime 80mg/kg max 2g

Dexamethasone 0.4 mg/kg

Sickle Cell

A 24 year old man is brought in by ambulance c/o severe back pain and a painful erection. He is of Afrocarribeal decent and is known to suffer from sickle cell disease. On examination he is in considerable discomfort & SOB his abdomen is soft and he has obvious priapism.

Describe 4 steps in your initial management. 2 points

Give O2, IV access, IV analgesia morphine 10 mg, IV fluids- 3-4 l NS

Name 3 investigations would you perform and why? 3 points

FBC- check for the severity of anaemia

U&Es- check for renal failure

ABGs- check pO2(lung crisis)

CXr- lung involvement/pneumonia

ECG- exclude possibility of an infarct

List 3 indications for exchange transfusion in sickle cell anaemia 3 points

Neurological- 1 TIA

2 CVA

3 Seizures

4 Cranial nerve palsies

5 Lung involvement – pO2 <9 on FiO2 of >60%

6 Priapism

7 Sequestration syndromes

List 4 causes of sickle cell crisis – 2 points

Cold, infection, hypoxia, dehydration, alcohol intoxication, emotional stress, pregnancy, acidosis

Wrist injuries

Name this injury 1 point



<i>Perilunate dislocation</i>
Describe your management in A&E- 3 points
<i>Analgesia, immobilisation- below elbow backslab, urgent referral ortho/hand surgeon</i>
Name 6 carpal bones and ossification ages. 6 points
<i>Capitate- 6/12 Hamate-6/12 Triquetrum- 2-4 years Lunate- 3-5 years Scaphoid- 4-6 years Trapezium- 4-6 years Trapezoid- 4-6 years Pisiform- 12 years+</i>