In spinal cord injury.
What does power 0-5 mean. (5 points)

0- No movement *1- Minimal movement* *2- Movement not against gravity* *3- Movement against gravity* *4- Movement against some resistance* *5- Movement against full resistance*
Below what level of spinal injury does neurogenic shock become less pronounced and why? (2 points)
Below C6- sympathetic nerves leave the SC between C7 and L1
A 75 year old man presents to A&E c/o weakness in his hands. He fell over the previous evening and hit his forehead on the table on the way down. Today he noticed that he keeps dropping things and was unable to brush his teeth. What is this syndrome called? 1 point What is the most common condition predisposing to this injury? 1 point
Central cord syndrome *Cervical Spondylosis*
In what age group is SCIWORA most likely? 1 point
The young – especially <9 yrs old

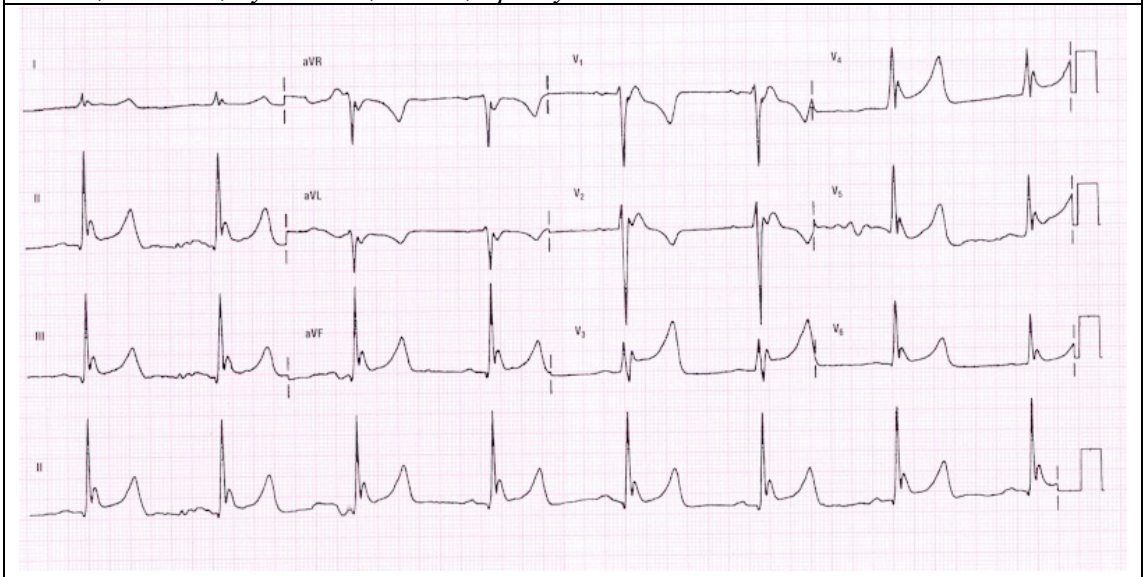
A 12 year old boy presents to your department with a 4 hour H/O headache, preceded by a day H/O cold, runny nose and temperatures. Mum noticed a fine petechial rash on his belly.
Name 3 investigations which would could alter your management in A&E and why. (3 points)

LP- to check for the signs of meningitis *WCC- check for leukopenia,* *Platelets-thrombocytopenia* *Hb- anaemia* *U&E- Hyponatraemia* *BM/Glucose- hypoglycaemia*
Name 3 contraindications to LP (3 points)
Coagulopathy *Raised intracranial pressure* *Cellulitis/infection at the site of LP* *Patient/carer refusal* *Spine abnormalities*
Name 4 abnormalities in LP results suggestive of bacterial meningitis. (4 points)

Pressure- raised >15-18cm
High WCC- typically thousands, except in pt with shunts who tend to have high WCC
Presence of microorganisms on gram stain
Glucose- lower than serum
Protein- high (>150 usually >1000)
Frank puss

Hypothermia

At what temperature would you consider pt to be hypothermic? 1 point

A CORE temperature of 35^{o}C or less
List 4 symptoms of mild hypothermia. 4 points
Shivering, tachycardia, tachypnea, peripheral vasoconstriction, increase in BP, ataxia, amnesia, dysarthria, ataxia, apathy

This ECG shows 2 signs typical of moderate hypothermia. What are they? 2 points
J waves (Osbourne waves), bradycardia
List 2 non environmental, chronic conditions which would predispose you to hypothermia. 2 points
Hormonal • *Hypothyroidism* • *Hypopituitarism* • *Diabetes* • *Hypoadrenalism* *CNS tumours*
What effect does hypothermia has on the urine output and why? 1 point
Polyuria- impairs renal concentrating ability leading to "cold diuresis"

A 5 year old boy comes with his mum to A&E, with difficulty in breathing. HE was well until a couple of hours ago except for a bit of a cold and runny nose. He has no past medical history but is looking very unwell now. His RR is 40 with an obvious stridor and significant accessory muscle use, he is holding his head forward, unable to swallow saliva, his temp is 39.5 ^{0}C. Give 2 differential diagnoses. 2 points

Epiglottitis *Severe Croup* *Tracheitis*
What would be your first action in management of this patient? 1 point
Give O_2
Despite your care the child is not improving, appears septic and anxious. Describe the subsequent steps in your management. 3 points
Keep child calm *Call paediatric help* *Call ICU/anaesthetist* *Set up for urgent intubation/surgical airway* *Point subtracted for IV access and antibiotics*
The X-ray on the right was performed in a 2 year old who presented in a similar way. Name 3 abnormalities on this X-ray. 3 points 
hypopharyngeal dilatation, *the swollen epiglottis,* *lack of definable aryepiglottic folds*
What are the 2 most important steps in the management of this disease? 1 point
Secure airway *IV antibiotics*

A 19 year old male was found on the beach at 0100. His friends brought him to A&E but promptly disappeared. On arrival in the department he is very drowsy- GCS=
Eye- 1
Verbal- 4
Motor- 5
There are no obvious signs of external injuries but he is wet and covered in sand.
Describe 4 important aspects of your initial treatment. 2 points

O2, immobilise neck, IV Access, remove wet clothing and actively re-warm
His pulse is 120, BP 100/60. Apart from the usual FBC, U&Es what further investigations would you carryout? 3 points
Sats, BM, ABG, C spine X-ray, CXr, core temperature ½ point each
His electrolytes are as follows: Na- 150 K- 3.6 Cl- 101 Ur- 6 Cr- 115 HCO3- 20 Gluc- 3.5 What are the 2 abnormalities? 2points
Hypernatraemia and increased anion gap
What is the likely initial cause of the state the patient is in? 1point
Ethanol intoxication- 30-50% of near-drownings are associated with drinking.
He was found on a sea beach. What difference does that make to your initial management? 1point Which of the above tests suggest that he might have spent some time in the sea and why? 1point
No difference to management *Na is high suggests swallowing sea water*