**Acute Ischaemic Stroke**

a) What imaging modalities are recommended by the National Institute for Health and Care Excellence (NICE) in acute stroke? (1 mark)

Urgent non-contrast CT head scan.

b) What specific treatments can be considered for acute thrombotic ischaemic strokes? (4 marks)

- I.V. thrombolysis with alteplase within 4.5 hrs
- Intra-arterial thrombolysis
- Mechanical thrombectomy within 6 hrs
- Craniectomy

c) In these patients what is the potential consequence of severe hypertension? (1 mark) What level of hypertension (systolic and diastolic) is regarded as severe after ischaemic stroke? (2 marks)

- There is an increased risk of haemorrhagic infarct.
- Severe hypertension is regarded as systolic AP >220 mm Hg or diastolic AP >110 mm Hg.

d) A patient has had a large hemispheric infarction following a stroke. Outline your management of this patient following admission to critical care. (12 marks)

- Ventilation: Intubate immediately if signs of respiratory insufficiency or neurological deterioration.

  Mode of ventilation is at the clinicians discretion

  Aim for normocapnia (PaCO2 4.5–5.0 kPa) unless impending cerebral herniation

- Sedation

- Thrombolysis

- Arterial pressure control MAP should be maintained >85 mm Hg Systolic pressure should be kept less than 220
• Nutrition

• Glycaemic control: Maintain blood glucose 7.8–10 mmol litre⁻¹

• Transfusion threshold 70 mg dl⁻¹ recommended

• DVT prophylaxis: Use intermittent pneumatic compression rather than stockings
  
  Prophylactic LMWH should be instituted early and continued as long as the patient remains immobile

  Early mobilization for haemodynamically stable patients

• Temperature control: Initiate active cooling for pyrexial patients when core temperature reaches 37.5°C

• Osmotherapy: Both mannitol and hypertonic saline are considered safe, choice should be based on renal function, serum sodium, and whether the patient will tolerate intravascular volume expansion

• Patient position: Nurse at 30° head up

• Seizure prophylaxis is considered.