

SCE Mock Exam – BGS Trainee’s Weekend 2016

Question 1

An 82-year-old lady falls while chasing her grandson round a garden. She lands with her left arm impacting onto his scooter. She presents to A&E with pain, deformity and weakness in her hand.

The radiology report shows:

“A comminuted fracture to the midshaft of the left humerus”

What neurological deficit is she most likely to have sustained?

- A. Wrist drop
- B. Claw hand
- C. Wartenberg’s syndrome
- D. Ape-hand deformity
- E. Loss of hand grip

Question 2

Mrs Watts, 82 years, retired medical secretary has attended your memory clinic with her husband. He has expressed real concern for his wife’s memory in the last few months, as there were more instances where she had forgotten what she had for her meals and more distressingly her recent birthday party the family celebrated with her a few weeks ago. He had noticed she has been more forgetful for the last two years but they both put this down to getting older.

Which aspect of neurocognitive function is first affected in Alzheimer’s disease?

- A. Free recall
- B. Episodic memory
- C. Paired associate learning
- D. Semantic memory
- E. Verbal fluency

Question 3

Which of the following features count in the PRISMA 7 questionnaire for the identification of frailty?

- A. Age over 80 years
- B. Male gender
- C. Recent bereavement
- D. Prolonged timed up and go

E. Social support if needed

Question 4

An 86 year old gentleman with confirmed lung cancer is admitted with new severe confusion. He is found to have a new low sodium of 116 mmol/l, a plasma osmolality of 210 and a urine osmolality of 180. He is euvolaemic and is not on any causative medications. Due to the severity of hyponatraemia and his symptoms he is started on hypertonic saline. His sodium is rechecked about 6 hours after the hypertonic saline has been started and it has come up to 132. He is currently asymptomatic.

Which of the following represents the best management?

- A. Stop fluids
- B. Change the hypertonic saline to normal saline
- C. Change the hypertonic saline to 10% dextrose
- D. Slow the hypertonic saline to half previous rate
- E. Continue the hypertonic saline

Question 5

A 76 year old lady is admitted to hospital with shortness of breath, orthopnoea and cough. Her oxygen saturation on air is 90% and examination reveals bilateral crepitations to the midzones and a JVP at 8am. She has a BMI of 30kg/m²

Which of the following may lower your BNP?

- A. Left ventricular hypertrophy
- B. Hypoxaemia
- C. Age >70
- D. Obesity
- E. Cirrhosis

Question 6

An 82 year old care home resident is admitted to hospital with a severe pneumonia. Although this is successfully treated she develops MRSA bacteraemia from a suspected cannula site infection with a suspicion that she may also have developed infective endocarditis (she is not well enough for a TOE, but the TTE is suggestive). She is treated with 7 days of iv vancomycin and the decision is made for her to be discharged on linezolid to continue for a further 5 weeks.

What monitoring tests does she require in the community due to the linezolid?

- A. Regular monitoring of visual acuity and visual fields
- B. Fortnightly blood tests for LFTs
- C. No monitoring required

- D. Weekly U+Es
- E. Linezolid should not be given for more than 4 weeks due to risk of agranulocytosis

Question 7

You are seeing a 72 year old with chronic liver disease. Which of the following symptoms is he most likely to complain of?

- A. Falls
- B. Dizziness
- C. Leg swelling
- D. Headache
- E. Weight loss

Question 8

Long-term anticoagulation after a first unprovoked VTE is favoured by:

- A. Male gender
- B. Age over 80
- C. DVT
- D. Family history
- E. Right heart strain

Question 9

An 82 year old gentleman has recurrent falls. He complains of sudden onset vertigo and nausea, which started 6 months previously. This has improved with time and prochlorperizine but he still gets vertigo on head movement, which has led to a number of falls. Due to the vertigo he has become anxious and socially withdrawn. On examination he has a mild left sided nystagmus but no other signs. It is felt that he has had vestibular neuritis.

Which of the following factors is most likely to have caused his incomplete central vestibular compensation?

- A. Prochlorperizine
- B. Anxiety
- C. Exaggeration of head movement
- D. Social withdrawal
- E. Falls

Question 10

82 year old with reduced ejection fraction heart failure is on maximum tolerated doses of Ramipril and bisoprolol.

Which of the following should be added next to most improve long term prognosis?

- A. Losartan
- B. Furosemide
- C. Digoxin
- D. Ivabradine
- E. Eplerenone

Question 11

75 year old with heart failure with preserved ejection fraction has been in admitted to hospital 6 times in the last 6 months.

Which of the following is most likely to reduce the number of hospitalisations?

- A. ACE inhibitor
- B. Beta blocker
- C. Angiotensin receptor blocker
- D. Spironolactone
- E. Furosemide

Question 12

A 78 year old lady is referred by her GP with suspected cellulitis of her right leg. She reports a 7 year history of a chronic leg ulcer on the background of a previous car injury involving that leg. Over the preceding 6 weeks the ulcer has become more painful and is discharging a foul smelling exudate. She has been tried on flucloxacillin and then clarithromycin orally but with no effect. She is systemically well and swabs have just shown normal commensal organisms.

What is the most appropriate next stage of management?

- A. Blood cultures
- B. Further swabs
- C. Broad spectrum iv antibiotics
- D. Broad spectrum oral antibiotics
- E. Biopsy

Question 13

An 82 year old presents with a second episode of acute gout, which was severe enough to cause a hospital admission. He has hypertension and is obese but otherwise well and has no other past medical history or allergies.

What of the following treatments should he be started on initially?

- A. Colchicine
- B. Prednisolone
- C. Febuxostat
- D. Allopurinol
- E. Intra-articular steroid injection

Question 14

Which of the following investigations would confirm your diagnosis of pseudogout in the scenario above (Q13)?

- A. The presence of MSU crystals in synovial fluid
- B. Bony destruction to MTP joint on x-ray
- C. Hyperechoicity of the cartilage on USS
- D. Raised uric acid levels
- E. Joint erosions on CT

Question 15

A 91 year old lady is admitted from her own home where she lives with her daughter. She is treated for an exacerbation of her heart failure with good effect. Prior to admission she was fully dependent for all activities of daily living and had moderate vascular dementia. She has a history of heart failure, PE, dementia and epilepsy. She is on furosemide 80mg od, fluoxetine 20mg od, baclofen 10mg TDS, levetiracetam 500mg BD and carbamazepine 300mg om.

She responds well to treatment and is ready for discharge when her daughter reports she is significantly more confused and is refusing to eat, drink and take medications. She is screened for causes of delirium including blood tests, urine sample and rectal examination but everything comes back negative. Her examination reveals a very confused lady with echolalia and occasional eye deviation.

Which of the following is the most appropriate intervention?

- A. Stop the baclofen
- B. Increase the carbamazepine

- C. Stop the fluoxetine
- D. Start regular ramipril
- E. Start regular clobazam

Question 16

An 82 year old lady with advance COPD presents with an infective exacerbation and increasing SOB. She is treated with bronchodilators, steroids, antibiotics and oxygen via a non-rebreathe mask at 10l/min.

Her arterial blood gas at this stage is:

pH 7.18
P02 = 8.1 kPa
PC02 = 14.2 kPa
HCO3 = 29 mmol/l

Her oxygen therapy is changed to 28% via a venturi system and her arterial blood gas changes to:

pH = 7.3
P02 = 5.3 kPa
PC02 = 11 kPa
HC03 = 28 mmol/l

What should the next step in her management be?

- A. NIV with 2L entrained oxygen
- B. 2L/min oxygen via nasal cannula
- C. Increase her oxygen to 35% via a venturi system
- D. Aminophylline infusion
- E. Refer to ITU for invasive ventilation

Question 17

A 76 year old man is admitted with symptomatic hypercalcaemia (adjusted calcium 3.7 mmol/l). He has no past medical history, is not on any medications and has normal renal function. His examination reveals some palpable cervical lymph nodes and his CXR shows a right hilar mass.

Which of the following is recommended for his immediate management?

- A. Low calcium diet and supplemental intravenous fluid hydration
- B. Low calcium diet and administration of calcitonin 4 units/kg
- C. Zolendronic acid 4mg
- D. Furosemide 40-80mg iv
- E. Supplemental Intravenous fluid hydration

Question 18

An 81 year old lady presents with general fatigue and SOB on exertion. She has a history of CKD III and has chronic leg ulcers. Her Hb is 9.8 mmol/L with a low MCV of 72fl and a ferritin of 65 micrograms/L.

What is the next best course of action recommended in relation to her anaemia?

- A. Start a 3 week trial of iron replacement and review in 6 weeks
- B. Refer her to renal physicians for consideration of EPO
- C. Check coeliac serology
- D. Check B12 and folate
- E. Check TFTs

Question 19

A 78 year old man is admitted to hospital with fever and rigors. He has a history of CKD III, diabetes, PVD with bilateral below knee amputations, hypertension and cognitive impairment. He lives alone and receives a TDS package of care for personal care and assistance with medications. He is treated with iv antibiotics at a renal dose and the sepsis responds but his renal failure slowly deteriorates over the 2 weeks he is in hospital. This acute on chronic kidney injury is appropriately managed but does not immediately reverse. He is successfully discharged with outpatient follow up and when he is seen 4 weeks later his eGFR is 5 ml/min and has remained static from his discharge from hospital.

What is the most appropriate next step in management?

- A. Refer to renal physicians to consider haemodialysis
- B. Refer to renal physicians to consider peritoneal dialysis
- C. Refer back to his GP for continued monitoring
- D. Review renal function and optimise medications regularly in this clinic
- E. Discuss end of life care with the patient

Question 20

How do you measure the correct height of a walking stick?

- A. From floor to elbow held at 15 degrees
- B. From floor to wrist with elbow held at 15 degrees
- C. From floor to waist
- D. From floor to wrist with elbow held at 45 degrees
- E. From floor to elbow held at 45 degrees

Question 21

A frail 92 year old lady is on a rehabilitation ward following a DHS to her right hip post traumatic fractured neck of femur. She unfortunately falls while trying to stand unaided and sustains a Colles fracture to her right wrist.

What is the most appropriate next stage to try in her rehabilitation?

- A. Mobilisation with a gutter frame
- B. Mobilisation with a single crutch held in left hand
- C. Mobilisation with a hoist
- D. Mobilisation with a zimmer frame
- E. Mobilisation with a delta frame

Question 22

An 85 year old man is recovering from a fall secondary to an infective exacerbation of his COPD. He lives in a 2nd floor council flat with no lift and has very little in personal savings. A friend does all his shopping for him as he can no longer manage the stairs, and is happy to continue this. He recovers well and is self-caring on the ward but is still unable to manage stairs due to breathlessness and severe knee arthritis. He raises the possibility of moving into a nursing home.

What is the most appropriate plan for discharge?

- A. Discharge home as he is back to baseline
- B. Refer to social services for consideration for a nursing home
- C. Refer to bed-based intermediate care for work on stairs
- D. Discharge home with refer to social services to consider rehousing
- E. Refer to home-based intermediate care for work on stairs

Question 23

The National Audit of Intermediate Care shows that the average waiting time in an acute hospital for an intermediate care bed is:

- A. 1 day
- B. 3 days
- C. 4 days
- D. 6 days
- E. 10 days

Question 24

What is the current rate per week for attendance allowance for a 92 year old female living at home with advanced dementia who is bedbound and doubly incontinent with a grade 2 sacral pressure sore?

- A. £54.45
- B. £81.30
- C. £61.35
- D. £40.50
- E. £100.45

Question 25

An 82 year old lady presents with a fall in which she sustains a neck of femur fracture. She reported feeling giddy and described vertigo on a number of occasions, associated with transient blurring of her vision. Her CT head was normal, 24 hour tape showed SR throughout and TSH and calcium normal.

Which test is most likely to determine the cause of her fall?

- A. Head impulse test
- B. Lying and standing blood pressure
- C. Implantable event recorder
- D. MRI brain
- E. Tilt table test

Question 26

A 78 year old man with Parkinson's disease undergoes a femoral nail fixation following an extracapsular neck of femur fracture. He initially recovers well but is progressing slowly and then becomes drowsy when sitting out of bed with an associated systolic blood pressure drop. On examination, tone normal bilaterally, bradykinesia on finger tapping worse on the left than the right, no tremor.

Lying BP 140/75
Standing 85/54
Hb 95
Creatinine 84
eGFR 88

Current medication:
Levodopa 100/25 TDS,
Fludrocortisone 50mcg bd

Which of the following is the correct management.

- A. Reduce the levodopa dosage
- B. Increase the levodopa frequency
- C. Increase fludrocortisone
- D. Add rotigotine 2mg per 24 hours
- E. Give 1 unit blood transfusion

Question 27

A 76 year old female presents following a fall. On further history taking she has been having several episodes of palpitations with associated mild dyspnoea and light headedness.

PMH includes:
HTN
Previous bleeding duodenal ulcer
CKD
Recurrent falls
Ischaemic stroke with haemorrhagic transformation (no residual deficit)

ECG reveals AF.
Creatinine of 215 (at baseline)

What would be your next step in management of this lady?

- A. Commence a NOAC
- B. Commence Warfarin
- C. Perform a 24hr tape

- D. Perform an echo
- E. Referral to cardio for consideration of a Watchman's device

Question 28

A 79 year old woman is admitted with a cough, shortness of breath and confusion. Her GP had recently started her on antibiotics for a chest infection. Past medical history includes hypertension, GORD, overactive bladder, chronic lower limb lymphoedema and depression.

Which of the following medications is LEAST likely to contribute to a person's delirium?

- A. Augmentin
- B. Bisoprolol
- C. Tolteridone
- D. Sertraline
- E. Ranitidine

Question 29

An 87 year old lady is admitted to the acute medical ward with a urinary tract infection. Her son reports she has been getting mildly forgetful over past few months but manages ADLs independently. On the ward she is not sleeping and wandering around the bays quite agitated, causing distress to other patients.

Which of the following medications are recommended by NICE for the acute treatment of delirium?

- A. Lorazepam
- B. Aripiprazole
- C. Risperidone
- D. Olanzapine
- E. Quetiapine

Question 30

What proportion of people with dementia with experience the behavioural and psychological symptoms of dementia (BPSD) at some point?

- A. 10%
- B. 30%
- C. 50%
- D. 70%
- E. 90%

Question 31

Mrs Watts has seen you in the memory clinic. After gaining a collateral from her husband you have discovered she has a two year history of increasing impairment of her cognitive and executive functioning: increased forgetfulness, difficulties concentrating on packing groceries, struggles to find the right word often, instances of leaving the kettle on fire for some time. Her neurological examination was otherwise unremarkable.

Her MMSE was 18, ACE-R was 72 and her CT scan revealed medial temporal lobe and hippocampal atrophy.

Your assessment is consistent with a diagnosis of Alzheimer's dementia and you wish to start her on donepezil. She asks you about side effects of the medication.

Which of the following are NOT recognised side effects of donepezil?

- A. Cataract
- B. Faints
- C. Gastrointestinal bleeds
- D. Glaucoma
- E. Tremor

Question 32

An 86 year old man with known moderate Alzheimer's dementia is in hospital with pneumonia being treated with intravenous Benzylpenicillin 1.2g QDS and Flucloxacillin 1g TDS. He has had a previous heart attack and has benign prostatic hypertrophy.

Usual medications:

Finasteride 5mg

Aspirin 75mg

Simvastatin 40mg

Ramipril 2.5mg

Donepezil 5mg

Furosemide 40mg.

It is noted that his liver enzymes have been becoming progressively more deranged:

ALT 150 units/l

Bil 75 micromol/l

ALP 570 u/l

Which drug is most likely to be causing this picture?

- A. Finasteride
- B. Simvastatin
- C. Donepezil
- D. Benzylpenicillin

E. Flucloxacillin

Question 33

With regards to further investigation of lower urinary tract symptoms in men, according to NICE guidelines which of the following is an indication for imaging only rather than imaging and cystoscopy?

- A. Haematuria
- B. Recurrent infection
- C. Sterile pyuria
- D. Chronic retention
- E. Severe symptoms

Question 34

A 90 year old man with a history of dementia is admitted to AMU. He has a BMI of 17.5kg/ m² and appears very thin in the bed. His family report gradual weight loss over past 2 years and poor intake.

Which of the following are not implemented in weight loss in people with dementia?

- A. Visual-cognitive deficiencies
- B. Using white plates
- C. Loss of contrast perception
- D. Concurrent illness
- E. Cachexia

Question 35

A 95 year old lady with a hip fracture following a fall develops a pressure ulcer. Which of the following is the least relevant?

- A. Longstanding history of diabetic neuropathy
- B. Waterlow score of 21
- C. MUST score of 0
- D. History of Alzheimer's dementia
- E. Long-lie following a fall

Question 36

A 92 year old woman is admitted from a nursing home with pneumonia. She has a BMI of <20, very thin, dry skin, is doubly incontinent but fully mobile. The home reports no weight loss but she has a poor appetite.

What is her Waterlow score?

- A. 4
- B. 6
- C. 10
- D. 15
- E. 20

Question 37

An 81 year old lady with advanced dementia and type 1 diabetes is admitted with a severe pneumonia. She is very frail and after discussion with her family the decision is made to manage her symptomatically. Her prognosis is expected to be a few days.

Insulin Regimen:

Novomox 30, 12 units twice daily.

Prior to admission, her sugars had been running between 4-8 mmol/l on a small diet.

In regards to her diabetic management, how would you alter her insulin?

- A. Stop all insulin
- B. Continue at the same dose
- C. Reduce to novomix 30 at 10 units bd
- D. Switch to insulin glargine 24 units
- E. Switch to insulin glargine 22 units

Question 38

A 95 year old devout Muslim gentleman is admitted through A+E early on a Sunday morning from his own home. He is known to have advanced lung cancer and had recently been treated with oral antibiotics for a pneumonia. His wife accompanies him, but appears very distressed and confused at events and is unable to take on any information given to her and they have no children.

He is extremely unwell with worsening of the pneumonia but also had a fall prior to the deterioration. His examination reveals a severely cachectic gentleman with no obvious injuries but a severe pneumonia. He undergoes routine investigations including a CT head due to confusion and the fall. These support the diagnosis of pneumonia in a very frail man but with no other injuries seen. Despite optimal treatment he passes away.

What is the best course of action?

- A. Discuss the case with the coroner's officer, first thing on Monday morning
- B. Arrange for the body to be prepared by a male nurse
- C. Request a chaplain to assist
- D. Request the chaplain to find a male muslim volunteer to prepare the body
- E. Release the body immediately to the family

Question 39

An 85 year old lady presents following a hip fracture. She recalls tripping on an uneven paving slab in her garden. She undergoes fracture repair surgery and her recovery is uneventful. Her past medical history is of AF, HTN and a hiatus hernia giving rise to Barrett's oesophagus for which she is having yearly endoscopy surveillance.

Medications:

Lansoprazole 30mg od
Ramipril 5md od
Bisoprolol 2.5mg od
Warfarin (INR 2-3)

Investigations:

Calcium 2.55
Vitamin D 76
PTH 6.2
ALP 100
Hb 95
MCV 82
eGFR 89

What would be the most appropriate treatment for her bone health?

- A. Start calcium and vitamin D replacement
- B. Calcium and vitamin D replacement plus an oral bisphosphonate
- C. Calcium and vitamin d replacement with intravenous bisphosphonate one week following surgery.
- D. Calcium and vitamin d replacement plus denosumab
- E. No treatment change.

Question 40

74 year old lady with numerous fragility fractures presents with a further fracture. She is seen in the fracture liaison service and denosumab is suggested as a possible treatment.

Which of the following is true about denosumab?

- A. It is associated with the precipitation of atrial fibrillation
- B. Denosumab is given by daily subcutaneous injection
- C. Denosumab can cause a profound hypocalcaemia
- D. Is the treatment of choice in patients with fragility fractures and raised PTH
- E. Works directly by inhibiting osteoblastic function

Question 41

Which of the following is not part of the best practice tariff for hip fracture care?

- A. Preoperative orthogeriatrics review
- B. Admission on a joint care pathway
- C. Time to surgery of <36 hours
- D. Bone health assessment of all patients
- E. Falls assessment for all patients

Question 42

A 77 year old man is admitted after sustaining an intra-capsular neck of femur fracture. He fell as a result of falling off his push bike whilst going to get his weekly shopping.

His PMH includes well controlled HTN only and AMTS on admission was 10.

What is the appropriate surgery for this gentleman?

- A. Un-cemented hemiarthroplasty
- B. Total hip replacement
- C. Intra-medullary nailing
- D. Cemented hemiarthroplasty
- E. Dynamic hip screw

Question 43

Which of the following drugs is licensed for the treatment of the neuropsychiatric symptoms observed in Alzheimer's dementia?

- A. Donepezil
- B. Memantine
- C. Olanzapine
- D. Risperidone
- E. Trazodone

Question 44

An 85 year old lady with moderate dementia has been persistently troubled with agitation to the point where her husband is having difficulty managing her at home and she is distressed. All of the possible causes of agitation in dementia have been excluded and it is felt that this is one of the psychological symptoms of dementia. She has no other past medical history and is generally well.

Which of the following medications has evidence of efficacy in the treatment of agitation in dementia?

- A. Citalopram
- B. Haloperidol
- C. Sodium valproate
- D. Donepezil
- E. Memantine

Question 45

An 84 year old lady presents with sudden onset dysphagia, slurred speech, ataxia, facial pain, Horner's syndrome and diplopia.

Which artery is likely to contain thrombus?

- A. Anterior inferior cerebellar artery
- B. Posterior inferior cerebellar artery
- C. Superior cerebellar artery
- D. Posterior cerebral artery
- E. Middle cerebellar artery

Question 46

An 82 year old man presented to the A+E of a thrombolysis centre with a 45 minute history of sudden onset of expressive aphasia and dominant arm weakness.

Medication:

Aspirin 75mg

Clopidogrel 75mg

Past Medical History:

NSTEMI 6 months earlier

Radiculopathy treated with facet joint injections 14 days earlier.

On examination:

NIHSS 4

BP 186/100

Which of the following most supports the decision not to thrombolyse?

- A. Time of onset of less than 1 hour
- B. NIHSS score of 4
- C. BP of 186/100
- D. Recent facet joint injection
- E. Dual antiplatelet therapy

Question 47

A 66 year old man is referred to the stroke service by his GP having woken with unilateral facial weakness and has a pronator drift on examination.

PMHx:

Hypertension

Diabetes

Medications:

Ramipril 5mg

Metformin 500mg bd

Which of the following makes a diagnosis of stroke more likely?

- A. Diabetic
- B. Hypertensive
- C. Age
- D. Pronator drift
- E. Waking up with symptoms

Question 48

According to current NICE guidelines, which of the following patients should have an urgent carotid endarterectomy?

Measurements are NASCET criteria

- A. 81 year old with right sided TIA and 50% left sided carotid stenosis
- B. 72 year old with no symptoms but a 69% left sided stenosis found on a private health check
- C. 62 year old with left sided stroke (NIHSS 13) and 80% left sided stenosis
- D. 76 year old with a previous severe right sided stroke, current right sided TIA and 80% left sided stenosis
- E. 86 year old with left sided stroke (NIHSS 34) and 86% right sided stenosis and evidence of frailty