

1. You review an 80 year man on the rehabilitation ward who is diabetic with an HbA1c 8.1%. He has had a previous myocardial infarction and recent blood tests have revealed an eGFR of 50. Currently he takes Metformin 1g BD. What would you do to achieve better glycaemic control:
 - a) add sulphonylurea gliclazide 40mg bd
 - b) add sulphonylurea gliclazide 80mg bd
 - c) DDP-4 inhibitor linagliptin
 - d) GLP1-receptor antagonist
 - e) Twice daily insulin regime

2. 85 year lady admitted to the Emergency Department resuscitation area with acute shortness of breath, she is markedly hypoxic with clinical features consistent with a diagnosis of congestive cardiac failure. She has had 50mg IV furosemide and oxygen and is a little better however her BP is 80/40. What is your next step:
 - a) GTN infusion
 - b) IV opiate
 - c) Talk with family and decide DNAR and to palliate
 - d) IV dobutamine
 - e) IV furosemide infusion

3. You review a 75 year old man on the acute medical take. He is a smoker with a history of ischaemic heart disease who presents with an episode of 45 minutes of left arm and left leg weakness and numbness; now fully resolved. His blood pressure is 135/80. What is the next most important investigation?
 - a) CT brain
 - b) Carotid Doppler in 24 hours
 - c) Carotid Doppler in one week
 - d) MRI brain to determine if anterior or posterior circulation stroke
 - e) Echocardiography

4. A 67 year old female with a background history of COPD is admitted with a left TACI and a dense hemiparesis. She develops a productive cough, and is pyrexial at 38.0C. Clinical examination reveals crackles at the right base. What is the next appropriate step?
- a) request a CXR
 - b) check an ABG
 - c) check the airway
 - d) start high flow O2 at 15l/min
 - e) maintain saturations between 88-92%
5. A 75 year old male with a background history of hypertension, IHD is admitted with falls. On direct questioning, he describes slowing of movements over the past 12/12 and freezing episodes, his gait is slow and hesitant. In terms of confirming his diagnosis, what is the most relevant step/investigation?
- a) CT Brain
 - b) DAT Scan
 - c) medication review
 - d) referral to physiotherapy
 - e) referral to Parkinsons Clinic for assessment
6. An 87 year old female with a background history of cerebrovascular disease and angina is admitted with right leg weakness and falls. She is noted to have vacant episodes on the ward lasting up to 2 minutes with focal right lower limb twitching. What is the most appropriate course of action?
- a) start antiepileptic medications
 - b) lying and standing BP
 - c) CT Brain
 - d) EEG
 - e) Check Mg level
7. An 80 year old male is admitted following falling in the snow, he is complaining of pain in his sacral and right groin region. It is particularly worsened on standing. What is the most appropriate investigation to exclude a sacral insufficiency fracture?
- a) MRI pelvis
 - b) Bone Scan
 - c) CT Pelvis
 - d) X-ray pelvis
 - e) Clinical assessment

8. An 83 year old retired head teacher is admitted from home with a five day history of a lower respiratory tract infection. You assess him on the medical admission unit and find him to be disorientated and distressed. With the aide of collateral history from his wife you discover that his confusion has developed over the past 24 hours. Which of the following assessment tool has the highest sensitivity for identifying delirium?
- a) Abbreviated mental test (AMT)
 - b) Mini-mental state examination MMSE
 - c) Addenbrookes cognitive examination (ACE)
 - d) Confusion assessment method CAM
 - e) Delirium rating scale
9. A 94 year old lady with advanced dementia is admitted from home where she has been cared for in bed by her aging husband. Physical examination reveals an elderly lady who appears malnourished with significant sarcopenia. She has a large sacral pressure ulcer. The sore covers an area 15cm by 10cm, the skin has broken down and the ulcer is deep, you can see exposed tendons and bone. The ulcer described would be classed as:
- a) Grade 1
 - b) Grade 2
 - c) Grade 3
 - d) Grade 4
 - e) Grade 5
10. An 82 year old lady who has experienced 6 falls at home in the past 6 months is referred to the falls clinic for assessment. She lives at home with her husband and the falls have had a significant impact on her day to day life. She no longer feels confident leaving the house alone due to a fear of falling and is becoming increasingly anxious about being alone at home. She and her husband report that she has never lost consciousness but is very unsteady on her feet and is now only mobilising with the support of her husband. According to latest evidence based practice which of the is most likely to benefit this lady:
- a) Strength and balance training
 - b) Referral for correction of visual impairment
 - c) Vitamin D supplementation
 - d) Cognitive/behavioural intervention
 - e) Hip protectors

11. You are reviewing an 84 year old lady on the orthogeriatric rehab unit who fell 6 weeks ago and sustained a fracture neck of femur which has been surgically repaired with a DHS. She has a past medical history which includes hypertension, COPD, previous gastric ulcer and atrial fibrillation. She has a BMI of 22. She is a current smoker. There is no history of parental hip fracture and she does not consume alcohol. Her current medication includes bendroflumethiazide, seretide inhaler, digoxin, lansoprazole and aspirin. What is the most appropriate next management?

- a) Request a DEXA scan to assess bone density
- b) Prescribe calcium and vitamin D supplements
- c) Prescribe alendronate and calcium and vitamin D supplements
- d) prescribe strontium ranelate with calcium and vitamin D supplements
- e) Prescribe teripartide

12. What is the mode of action of bisphosphonates?

- a) Increase action of osteoblasts
- b) Reduce the action of osteoclasts
- c) Increase the absorption of calcium and vitamin D from the gut
- d) Increase the action of osteoblasts and reduce action of osteoclasts
- e) Increasing bone turnover

13. A 76 year old lady is reviewed in the incontinence clinic complaining of a five year history of urinary frequency, urgency and occasional urinary incontinence. She is now having to wear pads 24 hrs and day and is limiting her social interaction due to anxiety regarding ability to access toilet facilities and concerns regarding body odour. Which of the following symptoms is suggestive of stress incontinence

- a) I pass urine more than 7 times a day
- b) My urine flow stops and starts
- c) I leak small amount of urine
- d) I have a fullness in my bladder area
- e) I have an urgent need to pass urine

14. An 84 year old man is admitted to hospital with a lower respiratory tract infection. He is grossly unkempt and there is evidence of malnutrition and self-neglect. Whilst in hospital his daughter raises concerns about his housing situation. He has been hoarding objects for a number of years and his house is completely full with piles of paper which he can barely move between. She has tried to get him to clear things out but he is very resistant and becomes distressed when it is discussed. Some cognitive assessments are carried out whilst he is in hospital and he scores 28/30 on MMSE. His symptoms are consistent with a diagnosis of:

- a) Early stage Alzheimers disease
- b) Frontotemporal dementia
- c) Diogenes syndrome
- d) Acute psychosis
- e) Lewy body dementia

15. A 69 year old man with metastatic lung cancer is admitted to hospital with increased shortness of breath associated with a recurrent left sided pleural effusion. A decision has already been made that recurrent drainage would be inappropriate. Whilst in hospital his condition worsens and his conscious level falls. He appears comfortable and is barely rousable. His wife who recognises that her husband is dying is very distressed by noisy breathing related to pooled secretions in his airway. What would be the most appropriate management step:

- a) Ask the nursing staff to suction the patients airway every hour
- b) Insert a nasal pharyngeal airway
- c) Explain to the wife that as the patient is not distressed no intervention is appropriate
- d) Request chest physiotherapy
- e) Prescribe hyoscine hydrobromide

16. A 84 year old man is admitted to the CDU after being found wandering around the city centre in the early hours of the morning in mid winter wearing his pyjamas. His son has been contacted who has confirmed that his father has a diagnosis of dementia but has been managing well at home and is usually quite well orientated. The patient has declined an assessment by the doctor as he is concerned he will be late for school and be in trouble with the headmaster. What is the best course of action?

- a) allow the patient to make his own way home
- b) arrange for hospital transport to take the patient home
- c) give IM haloperidol and return to assess in 1 hour
- d) ask him if he has done his homework
- e) orientate him and divert him

17. You review an 81 year lady in clinic. She gives a history of 3 months lower back pain for which she has taken Paracetamol and prn NSAID. She is otherwise well and asymptomatic. FBC/UE and Calcium normal. Serum protein electrophoresis reveals Ig G 15.2, Ig A 2.5, IgM 1.0, IgG kappa paraprotein 4.3g/L. Lumbar Xray – mild degenerative changes.

What is the most likely diagnosis?

- a) amyloid
- b) low grade lymphoma
- c) monoclonal gammopathy of undetermined significance
- d) myeloma
- e) solitary plasma cytoma

18. A frail elderly 85 year man presents with diarrhoea and faecal incontinence of 2 weeks. He has parkinsons disease , OA hips and knees and diverticular disease. He is on co-beneldopa, co-codamol and bendroflumethiazide. Abdo examination normal, PR NAD. Mild anaemia (11.0), Na 130, K 2.9, urea 15.3, creat 120

What is the most appropriate next investigation?

- a) Barium enema
- b) CT abdomen
- c) Faecal occult blood
- d) Flexible sigmoidoscopy
- e) Plain Xray of abdomen

19. 84 year lady presents with a fall but no loss of conciousness. She has a past medical history of type 2 diabetes, osteoarthritis, hiatus hernia and diverticular disease. Physical examination is unremarkable. A 24 hour ECG shows normal sinus rhythm with daytime 60-100, nocte 42- 58. Short run AF (5 beats) and apause 2.0 sec at 05:30. No symptoms.

What is the most appropriate management?

- a) amiodarone
- b) warfarin
- c) no intervention
- d) PPM
- e) 72 hour tape

20. A 72 year old man with metastatic prostate Cancer has been admitted to hospital with hallucinations, nausea and worsening back pain. Despite two hourly 5mg Morphine doses, his pain is not settling and hallucinations are worsening, what is the next appropriate course of action?
- a) Start PO Diclofenac 50mg TDS
 - b) Start Cyclizine IM 50mg TDS
 - c) Rehydration with IV Saline and check serum Calcium level
 - d) Give Haloperidol for hallucinations
 - e) Arrange CT Brain
21. An 80 year old female with metastatic Breast Cancer with skeletal metastases is taking 30mg MST BD for pain control. Despite 10mg Morphine solution 4 hourly for 24 hours, her pain is not controlled. She requests further analgesia, what is the next appropriate step in optimising her pain control?
- a) Add in NSAID regularly
 - b) Start Fentanyl Patch 12.5mg
 - c) IV Zoledronate infusion
 - d) Increase MST Dose to 50mg BD and increase breakthrough dose of Oramorph
 - e) Add in regular Paracetamol
22. A 70 year old male from a nursing home with metastatic lung Carcinoma is admitted with worsening confusion. He has a background of Chronic Kidney Disease and hypertension. He is on MST 20mg BD, Oramorph PRN, Aspirin 75mg OD. Nursing home staff report increased lethargy and hallucinations and fluctuating consciousness. What is the most likely underlying aetiology?
- a) Cerebral metastases
 - b) Acute on chronic kidney injury
 - c) Hypercalcaemia
 - d) Morphine toxicity
 - e) Intracerebral bleed

23. A 75 year old female is admitted with poor balance and recurrent falls. She has a background history of breast carcinoma, with previous mastectomy 2 years previously. There is a background Hx of IHD and a permanent pacemaker. She has had a 3/12 history of lower back pain, not settling with analgesia. Neurological examination of her lower limbs reveal a power grade of 2/5, with a sensory level at L1. What is the next appropriate step?
- a) Start high dose Dexamethasone
 - b) Urgent oncology referral for radiotherapy
 - c) Urgent MRI Spine
 - d) Urgent neurosurgical referral
 - e) CT Spine
24. Which of the following is not a phenotype associated with frailty?
- a) Fatigue
 - b) Weight loss
 - c) Thirst
 - d) Inactivity
 - e) Slow Gait
25. Which of the following is most correct?
- a) The Frailty index is easily usable in clinical medicine
 - b) A Frailty index score of 0.7 is usually incompatible with life
 - c) Frailty is twice as prevalent in men as in women
 - d) Disability and frailty are synonymous
 - e) Co-morbidity and frailty are synonymous
26. In considering physiological changes influencing the development of frailty, which of the following tends not to decrease with age?
- a) Oestrogen
 - b) Testosterone
 - c) Cortisol
 - d) Growth Hormone
 - e) Interleukin 2

27. A 70 year old male has been noted to be increasingly disorientated by his family for 8 months. They report behavioural problems and vivid visual hallucinations, which fluctuate on a daily basis. He has become slower and appears to have expressionless facies.
What is the likely diagnosis?
- a) Alzheimers Disease
 - b) Lewy Body Dementia
 - c) Frontotemporal dementia
 - d) Depression
 - e) Parkinsons Disease
28. A 85 year old female with advanced PD has been admitted to hospital with poor swallow and aspiration pneumonia. She is on Co-careldopa 125mg QDS, Rasagiline 1mg OD. Speech and Language Therapy have assessed her swallow and deemed her to have an unsafe swallow.
What would be the next appropriate step?
- a) Discuss feeding at risk with the patient
 - b) Start a rotigitine patch
 - c) Convert the medications to dispersible form and administer orally
 - d) Pass a NG tube for medications and treat the pneumonia
 - e) Start the Liverpool Care Pathway
29. A 69 year old female with idiopathic Parkinson's disease attended the outpatient clinic for routine follow up. She was being treated with ropinirole therapy alone. The dose had been increased at her last clinic appointment to improve motor control. During the consultation, her husband mentioned that he was very worried as she was spending an increasing amount of time and money on internet gambling and bingo sites and this was causing them some financial difficulty. He asked what could be done for the condition. What is the most appropriate advice to give?
- a). Commence an SSRI such as Fluoxetine
 - b). Decrease the dose of Ropinirole
 - c). Refer her for cognitive behavioural therapy
 - d). Suggest she self refers to Gamblers Anonymous
 - e). Switch to an equivalent dose Rotigotine patch

30. A 70 year old male with longstanding PD is developing 'off' periods and freezing episodes, despite being on Cocareldopa 125mg QDS and Ropinirole. He finds this is happening regularly approx 30 mins prior to his next dose of Co-careldopa. The best initial management is?
- a) Increase the dose of Cocareldopa to 5x/day
 - b) Add amantadine
 - c) Change Ropinirole to Rotigotine
 - d) Add rasagiline
 - e) Double the dose of Co-careldopa to 250mg QDS
31. A 78-year-old man presented after several falls. He had a 20-year history of rheumatoid arthritis and his only medication was sulfasalazine. On examination, he had been incontinent of urine and had difficulty in recalling recent events. He had chronic rheumatoid hand deformities, a right-sided grasp reflex and bilateral extensor plantar responses. He had difficulty in rising from a chair, walked with small paces and was unsteady on turning, having to hold on to his wife. What is the most likely diagnosis?
- a) Alzheimer's disease
 - b) cervical myelopathy
 - c) multi-infarct dementia
 - d) normal pressure hydrocephalus
 - e) Parkinson's disease
32. A 72-year-old woman with rheumatoid arthritis presented with dysuria of 2 days' duration. Her regular medication comprised methotrexate, prednisolone and paracetamol. On examination, she had a body mass index of 34 kg/m² (18–25). Investigations: urine culture coliforms, sensitive to ciprofloxacin. Which condition is most likely to be precipitated by the use of ciprofloxacin?
- a) gastric ulceration
 - b) glucose intolerance
 - c) Hepatitis
 - d) Pneumonitis
 - e) tendinopathy

33. A 70-year-old man presented accompanied by his wife, who stated that her husband had lost all interest in life.
What would support a diagnosis of dementia rather than depressive disorder?
- a) agitation
 - b) complaint of poor memory
 - c) impaired short-term memory
 - d) loss of libido
 - e) urinary incontinence
34. A 75 year old female presents with chronic leg ulceration which is a consequence of venous insufficiency.
Which one of the following is the most appropriate management strategy:
- a) appropriate systemic antibiotic in preparation for skin grafting
 - b) compression bandaging
 - c) improve the venous return by limb elevation
 - d) skin biopsy to exclude neoplasm
 - e) vein surgery
35. An 81 year old man admitted with a stroke requires NG feeding. After 5 days he becomes increasingly drowsy, which of the following electrolyte abnormalities is the most likely cause of his drowsiness?
- a) Hyperglycaemia
 - b) Hypermagnesaemia
 - c) Hyponatraemia
 - d) Hypocalcaemia
 - e) hypophosphataemia
36. Which of the following is the commonest cause of traveller's diarrhoea?
- a) E. Coli
 - b) entamoeba histolytica
 - c) giardia lamblia
 - d) shigella flexneri
 - e) Yersinia enterocolitica
37. Which of the following is true with regards to postural hypotension
- a) Diagnosed by a drop of 15mmHg systolic and/or 10mmHg diastolic
 - b) measured on lying and then on immediate standing
 - c) is only due to medications side effects
 - d) measure subsequent blood pressures with the person standing
 - e) should be treated even if asymptomatic

38. With regards to loss of consciousness and the DVLA, which of the following is true?
- a) Group 2 drivers do need to inform the DVLA if recurrent reflex vasovagal syncope occurs
 - b) syncope causing injury occurring whilst standing indicates high risk
 - c) If likely to be cardiovascular in origin group 1 drivers have their licence revoked for 6 months if no cause identified
 - d) An echocardiogram and ambulatory ECG must be done as part of investigation workup
 - e) group 1 drivers must cease driving for 3 months if cough syncope is diagnosed
39. The following are criteria for the diagnosis of Alzheimer's Dementia in the Diagnostic and Statistical Manual (DSM-IVR) except:
- a) The deficits do not occur exclusively during the course of a delirium
 - b) The course is characterized by a sudden onset and fluctuating cognitive decline
 - c) Agnosia
 - d) Aphasia
 - e) Memory Impairment
40. An 86 yr old lady presents from a residential home with a 3 day history of sleepiness, reduced appetite and new confusion. On initial examination there is evidence of reduced consciousness and inattention. Later on that night she becomes agitated and hyperactive, frequently getting out of bed and making lots of noise. You are called to 'give her some sedation'. Which of the following is the best *initial* management.
- a) Non-verbal techniques to de-escalate
 - b) Haloperidol 0.5mg PO or IM
 - c) Lorazepam 0.5mg IV
 - d) Re-orientation and re-assurance
 - e) Haloperidol 5mg PO or IM

41. The following are part of the Confusion Assessment Method Algorithm (CAM) for the detection of delirium except:
- a) Disorganised thinking
 - b) Inattention
 - c) AMTS <7
 - d) Acute onset and fluctuating course
 - e) Altered consciousness
42. The following common drugs have impaired renal excretion with advancing age, except one which has reduced hepatic metabolism with advancing age. Which drug has reduced hepatic metabolism?
- a) ACEi
 - b) Metformin
 - c) Digoxin
 - d) Morphine
 - e) Vancomycin
43. Age related changes in vasculature have important clinical correlates in terms of increased cardiac and cerebrovascular disease. Which of the following is a recognised age related change in the arteries?
- a) Increased intimal thickness
 - b) Improved endothelial function
 - c) Reduced collagen
 - d) Reduced vascular stiffness
 - e) Reduced systolic blood pressure and increased diastolic blood pressure