



Cert Geriatrics(SA)

THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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Examination for the Subspecialty Certificate in Geriatrics of the
College of Physicians of South Africa



23 August 2013

1 Paper Only

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 a) A medical school in South Africa (SA) is considering establishing a Department of Geriatric Medicine and asks for your input. Briefly discuss
- i) The trends of ageing and life expectancy in SA. (4)
 - ii) The rationale for a Department of Geriatric Medicine. (6)
- b) List the age-related physiological changes in respiratory function. (10)
- c) A 78-year-old retired businessman known to have chronic obstructive airways disease is recently diagnosed with early dementia. He has three adult children from his first wife and a further two from his second wife. His two families do not get on and are constantly at loggerheads. He is concerned about future decisions about his health and financial matters
- i) Briefly discuss the options for advanced directives within SA law and National Health Act. (8)
 - ii) What you would advise this patient? Justify your choice. (2)
- [30]
- 2 a) Briefly explain how age-related cardiovascular changes predispose the older person to manifest the following diseases
- i) Isolated systolic hypertension. (2.5)
 - ii) Atrial fibrillation. (2.5)
 - iii) Sub-endocardial ischaemia during critical illness. (2.5)
 - iv) Cardiac failure without excessive clinical congestion. (2.5)
- b) You diagnose major depression in a 72-year-old lady and decide she will benefit from the initiation of antidepressant therapy. You have the following agents available in your clinic: agomelatine, fluoxetine, duloxetine and mirtazepine. Very briefly list any major adverse effect, particular clinical characteristic that could favour the choice of a particular agent, and/or any specific routine clinical monitoring required for each agent. Also give an indication of the cost of each agent relative to the other agents.

(4 X 2.5 = 10)

PTO Page 2, Question 2c)...

- c) You are asked to assess an 82-year-old gentleman. His problems include the following
- Type 2 diabetes mellitus (current glycosylated haemoglobin is 8.6%) with body mass index 29.
 - Moderate chronic obstructive pulmonary disease with room air saturation of 89%.
 - Depression poorly responsive to escitalopram.
 - Bone mineral density shows T-score of -2.5 at the lumbar spine, -2.3 at the left neck of femur and -2.1 at the right neck of femur.
 - Proximal muscle weakness with three falls in the prior 6 months.

Bloods tests show: total testosterone to be 7.9 nmol/l (normal >12.0), Sex hormone binding globulin 79 nmol/l (normal range 8.2 - 60.8 nmol/l) free testosterone 90 pmol/l (normal 180-739 pmol/l)

Briefly discuss the following

- i) Clinical options available for replacement of testosterone therapy. (2)
- ii) Expected benefits of testosterone therapy for this gentleman. (2)
- iii) The risks/adverse effects of testosterone therapy for this gentleman. (3)
- iv) Essential clinical monitoring required and recommended follow-up advice. (3)

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- 3 A 65-year-old man with long standing well controlled hypertension presented with a six month history of slowly progressive difficulty with fine movements, worse in the right compared with the left hand, as well a progressive slowness and unsteadiness of gait. At initial examination he had an expressionless face with axial and limb rigidity. The latter was asymmetrical and worse on the right side. His range of ocular movements was normal. There was a mild pronation-supination tremor of his right hand. His blood pressure was 135/75 mmHg sitting and 125/70 mmHg standing, with no postural dizziness. He had significant postural instability. A diagnosis of Parkinson's disease was made and he was started on a combination of carbidopa/levodopa, 25/100 mg t.d.s.

At the three month review his wife reports that he had begun experiencing prominent non-threatening visual hallucinations of animate objects in the house, a few weeks after commencing the levodopa. She also noted episodes of confusion and disorientation, often associated with agitation and restlessness. In addition, she has observed a significant decline in his "short-term" memory. A cognitive assessment performed at the second visit revealed a score of 22/30 on the MMSE. He lost points on attention and concentration, delayed recall, three step command and intersecting pentagons. His Parkinsonian features had improved only slightly on the levodopa.

- a) Discuss the differential diagnosis of this man's condition. (10)
- b) What investigations would you perform aimed at identifying or excluding conditions that might cause or exacerbate his cognitive and behavioural symptoms? (10)
- c) Discuss the principles of the pharmacological management of his condition with respect to the treatment of his behavioural symptoms, cognitive impairment and Parkinsonism. (10)

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- 4 An 84-year-old lady, on treatment for hypertension and dyslipidaemia for more than 30 years presents with chronic constipation. Further history is difficult but she does admit to repeated falls and using a sleeping pill for many years for chronic insomnia.

Examination reveals an anxious old lady not orientated for time and place and unable to follow simple commands. It is not possible to perform the MMSE and the rest of the neurological examination is difficult but unremarkable. Her pulse rate is 60 beats per minute and regular with poor foot pulses, the blood pressure 100/60 mmHg supine and a 1/6 ejection systolic murmur is heard at the aortic area. The abdomen is distended and tender in the right flank and suprapubic areas with no signs of peritonism. There is no organomegaly or palpable masses and the bowel sounds and percussion are normal. A surgical abdomen is excluded. She also has osteoarthritis of the hands, wrists, knees and ankles.

Further information obtained from the family is that the patient is cared for in an Old Age Home, is fully independent for activities of daily living but has the following problems

- Multiple falls in past 2-3 years; with injury to the right chest wall during the last fall 4 days ago.
- Increasing forgetfulness over the past 2-3 years with occasional restlessness at night.
- Longstanding constipation with previous laxative use.
- Previous "back problems" with pain radiating to the legs and limited mobility.

Her current medication includes enalapril 10mg b.d., furosemide 80 mg daily, atenolol 50mg daily, sorbitol, senokot, risperdal 0,5mg nocte, alprazolam 0,5mg nocte, simvastatin 10mg daily and dispirin ½ tablet daily.

Discuss

- a) The differential diagnoses for the cause(s) of the falls in the above patient. (12)
- b) The laboratory, radiological and other investigations and/or assessments would you request to prove or exclude these causes? (9)
- c) The non-pharmacological, pharmacological and rehabilitative measures you would undertake to prevent further falls in this patient. (9)

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