

SELF-ASSESSMENT QUESTIONNAIRE

Renal medicine

■ Ten self-assessment questions (SAQs) based on the published articles will appear at the end of each CME specialty featured in *Clinical Medicine*. The questions have been validated for the purpose of CME by independent experts. Two (2) CME credits will be awarded to those achieving 80% correct answers. This opportunity is open only to RCP Fellows and Collegiate Members in the UK who are registered for CME*.

■ A loose leaf answer sheet is enclosed, which will be marked electronically at the Royal College of Physicians. **Answer sheets must be returned by 18 July 2002 to:**

CME Department (SAQs),
Royal College of Physicians,
11 St Andrews Place,
London NW1 4LE.

Correct answers will be published in the next issue of *Clinical Medicine*.

* Further details on CME are available from the CME department at the Royal College of Physicians (address above or telephone 020 7935 1174 extension 306 or 309).

Guidelines on completing the answer sheet

Your completed answer sheet will be scanned to enable a quick and accurate analysis of results. To aid this process, please keep the following in mind:

- 1 Please print your GMC Number firmly and neatly
- 2 Only write in allocated areas on the form
- 3 Only use pens with black or dark blue ink
- 4 For optimum accuracy, ensure printed numbers avoid contact with box edges
- 5 Please shade circles like this: ●
Not like this: ○
- 6 Please mark any mistakes made like this: ✕
- 7 Please do not mark any of the black squares on the corners of each page
- 8 Please fill in your full name and address on the back of the answer sheet in the space provided; this will be used to mail the form back to you after marking.

Q1 A 54 year old man who has smoked 15 cigarettes a day for the last 30 years is investigated for progressive weight loss, haemoptysis, hypoxia and general malaise. A chest X-ray shows bilateral patchy alveolar shadowing. Sputum cytology, bronchoscopy and a high resolution chest computed tomography scan are not diagnostic. Incidental urine dipstick testing reveals 3+ blood.

Which of the following statements about this patient are correct?

- (a) A plasma creatinine within the normal range excludes the presence of important renal pathology
- (b) An open lung biopsy is the next investigation of choice
- (c) He should have a renal ultrasound investigation
- (d) A positive p-antineutrophil cytoplasmic antibody (ANCA), which on ELISA is anti-myeloperoxidase positive, suggests an underlying small vessel vasculitis justifying immediate immunosuppression
- (e) A tissue diagnosis is not usually required when the ANCA is positive

Q2 A 69 year old woman presents with a four-month history of peripheral oedema, non-healing painful leg ulcers and a purpuric rash. Investigations reveal heavy proteinuria, hypoalbuminaemia and renal impairment (creatinine 196 µmol/l). Rheumatoid factor is strongly positive.

Which of the following statements about this patient are correct?

- (a) The presence of a rheumatoid vasculitis accounts for these findings
- (b) A rectal biopsy should be performed
- (c) Blood samples should be treated as potential biohazards
- (d) Treatment with methotrexate is indicated
- (e) Serum protein electrophoresis is likely to reveal a monoclonal immunoglobulin M kappa band

Q3 A 42 year old Caucasian man is found to have proteinuria (+++ on multistix) and haematuria on a routine urinalysis. Subsequent investigation, including a renal biopsy, confirms a diagnosis of immunoglobulin A nephropathy. His plasma creatinine is 150 µmol/l, cholesterol 6.2 mmol/l and blood pressure 145/85 mmHg.

Which of the following statements about this man are correct?

- (a) Nothing more need be done as his prognosis is excellent
- (b) Proteinuria should be formally quantified
- (c) He should be started on antihypertensive medication
- (d) He should be started on an angiotensin-converting enzyme (ACE) inhibitor
- (e) He should be started on a 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitor

Q4 A 54 year old man with Type 2 diabetes is found to have proteinuria (+++ on multistix) whilst being investigated by the vascular surgeons for claudication. He has a past history of poorly controlled hypertension and is currently taking bendrofluazide, atenolol and nifedipine. His plasma creatinine is 500 $\mu\text{mol/l}$. He has no symptoms of ischaemic heart disease (IHD).

Which of the following statements about this patient are correct?

- (a) He should be started immediately on an ACE inhibitor or angiotensin II receptor antagonist
- (b) Renal artery stenosis needs to be considered as a cause of his renal failure
- (c) As he has no symptoms of IHD, his cardiovascular risk is low and no further investigations are indicated at this point
- (d) Prior to considering renal transplantation, coronary angiography should be considered
- (e) He is most likely to die of renal failure in the future

Q5 The following statements regarding the provision of renal replacement therapy (RRT) are correct:

- (a) Peritoneal dialysis is now the main mode of dialysis
- (b) Survival is better in those with primary renal disease than in those whose renal disease is secondary to a systemic condition
- (c) The population need for RRT is currently being met
- (d) Live kidney donation is an important strategy for increasing the supply of kidneys
- (e) The number of patients on treatment has plateaued

Q6 The following statements regarding the epidemiology of CRF are correct:

- (a) Renovascular disease is more common in the elderly
- (b) Most hypertension in CRF is essential hypertension
- (c) Plasma creatinine is a valid marker of glomerular filtration rate
- (d) Ten per cent of patients requiring renal replacement therapy (RRT) are referred to a renal unit late, within a few months of needing RRT
- (e) Serum cholesterol is a reliable marker of coronary heart disease risk

Q7 A 59 year old man is admitted as an emergency following a collapse without loss of consciousness. He admits to recent ill health, severe constipation and urinary retention. Previously a heavy drinker, he denied alcohol for six months. Examination reveals a Glasgow Coma Scale score of 15/15; there is dysarthria and twitching of the upper limbs; pulse 78 per min and regular, blood pressure (BP) 122/68 mmHg. Investigations show: haemoglobin 111 g/l, sodium 128 mmol/l, potassium 2.7 mmol/l, chloride 60 mmol/l, bicarbonate 42 mmol/l, urea 32.5 mmol/l, creatinine 707 $\mu\text{mol/l}$, blood glucose 6.4 mmol/l, arterial blood gases pH 7.55,

PCO_2 47 mmHg, PO_2 53 mmHg, base excess +15. He is catheterised, producing 850 ml urine, pH 8 and proteinuria + urine sodium 29 mmol/l, potassium 24 mmol/l, urea 109 mmol/l, osmolality 255 mosmol/l. He is initially referred to the urologists and an ultrasound ordered.

Which of the following statements about this man are correct?

- (a) A diagnosis of chronic renal failure due to prostatic hypertrophy with acute on chronic retention is appropriate
- (b) Renal ultrasound will show severe hydronephrosis producing renal tubular acidosis
- (c) Hyponatraemia is due to syndrome of inappropriate antidiuresis (SIAD) and prostatic carcinoma
- (d) The correct treatment is intravenous hydrochloric acid
- (e) Urine chloride concentration is a useful confirmatory test in hypochloraemia

Q8 A 72 year old man is referred by his GP with a history of excessive thirst and tiredness. Initial investigations had revealed anaemia and renal failure. His drug treatment includes amlodipine 10 mg, prednisolone 10 mg for long-term asthma, calcitriol 1 μmg daily for bone preservation, and pravastatin 10 mg for hypercholesterolaemia. He admitted to polyuria during the day and at night, and took water to bed with him. Examination reveals that he is alert; he has a trace of oedema; BP 170 / 90. His prostate feels benign rectally (ca 30 g). Investigations show: haemoglobin 122 g/l, sodium 144 mmol/l, potassium 3.2 mmol/l, chloride 100 mmol/l, bicarbonate 36 mmol/l, urea 8.9 mmol/l, creatinine 177 $\mu\text{mol/l}$, glucose 3.9, calcium 3.1, phosphate 0.69 mmol/l, total protein 70, albumin 41 g/l, prostate specific antigen 4.5 mg/l, urine pH 7.5, blood, protein and ketones negative, glucose 5.5 mmol/l, urine osmolality 280 mosmol.

Which of the following statements about this man are correct?

- (a) This patient has diabetes insipidus
- (b) The most likely explanation for his hypokalaemic alkalosis is primary hyperaldosteronism
- (c) Partial urinary tract obstruction could present in this way
- (d) The cause of his polydipsia and polyuria is compulsive water drinking
- (e) He has primary hyperparathyroidism

Q9 An 83 year old man with a previous large anterior myocardial infarction (MI) complicated by heart failure continues to experience shortness of breath on exertion with orthopnoea and peripheral oedema despite treatment with lisinopril 20 mg daily and frusemide 40 mg daily. His serum creatinine, 127 $\mu\text{mol/l}$ at the time of his MI, has risen to 173 $\mu\text{mol/l}$. Which of the following statements about this man's management are correct?

- (a) The patient should be switched to an angiotensin receptor blocker to prevent further deterioration in renal function
- (b) In cardiac failure, renal responsiveness to diuretics is improved by giving larger doses
- (c) In renal failure, renal responsiveness to diuretics is improved by giving larger doses
- (d) The maximal natriuretic response to frusemide in renal insufficiency occurs with 160–200 mg given orally
- (e) If the diuretic response to a maximal dose of frusemide is inadequate, a thiazide should be added in renal failure

Q10 A 75 year old woman was admitted with chest pain due to inferior MI on a background of hypertension and stable angina. Serum creatinine was 120 $\mu\text{mol/l}$. She was discharged on ramipril, but readmitted two months later with shortness of breath and pulmonary oedema. Her blood pressure at the time of the second admission was 147/82 mmHg and her serum creatinine 293 $\mu\text{mol/l}$.

Which of the following statements about this woman's management are correct?

- (a) Coronary revascularisation is likely to lead to resolution of her cardiorenal failure
- (b) The angiotensin-converting enzyme (ACE) inhibitor should be stopped, at least temporarily
- (c) Treatment of her heart failure with oral hydralazine and nitrate will improve exercise performance and left ventricular (LV) function to the same extent as an ACE inhibitor
- (d) She should have a renal ultrasound
- (e) She should have an urgent renal biopsy

CME Intensive Care Medicine SAQs

Answers to the CME SAQs published in *Clinical Medicine* March/April 2002

Q1	Q2	Q3	Q4	Q5
a) T	a) F	a) F	a) T	a) F
b) F	b) F	b) T	b) F	b) F
c) F	c) F	c) F	c) F	c) F
d) F	d) T	d) F	d) T	d) F
e) F	e) F	e) T	e) T	e) T

Q6	Q7	Q8	Q9	Q10
a) F	a) T	a) F	a) F	a) T
b) T	b) T	b) F	b) F	b) F
c) T	c) F	c) F	c) F	c) T
d) T	d) T	d) F	d) F	d) T
e) T	e) F	e) F	e) F	e) F