CME: Renal medicine (144866): self-assessment questionnaire

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SAQs and answers are ONLINE for RCP fellows and collegiate members

Format
Candidates are asked to choose the best answer from the five possible answers. This best of five format is used in many medical examinations; however, the questions are not intended to be representative of those used in the MRCP(UK) Part 1 or Part 2 Written Examinations.

The answering process
1 Go to https://cme.rcplondon.ac.uk
2 Log on using your usual RCP username and password
3 Select the relevant CME question paper
4 Answer all 10 questions by selecting the best answer from the options provided
5 Once you have answered all the questions, click on Submit

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Carrying out this activity allows you to claim two external CPD credits. These will be automatically transferred to your CPD diary, where you can review the activity and claim your points.

1. A 40-year-old woman presents as a potential kidney donor for her son. He is 15 years old, has recently been diagnosed with chronic kidney disease stage 5, and has a biopsy consistent with Alport syndrome. She has no past medical history of significance and takes no regular medication. Her blood pressure in clinic is 130/80 and urinalysis showed 1+ blood and no protein. Her eGFR is >90 mls/min. She is anxious for her son and keen to be worked up as a donor immediately.

What is the most appropriate course of action?
(a) Advise her that the family history suggests she is carrier of X-linked Alport syndrome and refer her for donor workup.
(b) Arrange for her and her son to have genetic testing of COL4A3, COL4A4 and COL4A5.
(c) Arrange for her to have a kidney biopsy in view of microscopic haematuria.
(d) Arrange for her to have an ultrasound scan of her kidneys to rule out scarring.
(e) Commence ramipril for blood pressure control.

2. According to the KDIGO 2022 clinical practice guideline for diabetes management in chronic kidney disease (CKD), which of the following drug combinations are considered first line therapies in people with diabetes and CKD?
(a) Metformin + SGLT2i + ACEi/ARB
(b) Metformin + SGLT2i + ACEi/ARB + statin
(c) Metformin + SGLT2i + ACEi /ARB + aspirin + statin
(d) ARB + metformin + SGLT2i + ACEi + statin
(e) Metformin + SGLT2i + ACEi/ARB + GLP-1RA

3. A 60-year-old patient presents acutely unwell with nausea, vomiting, hypotension and reduced urine output. His results show acute kidney injury with serum creatinine of 480 umol/l; eGFR 11 ml/min/1.73 m². His Hb is 95 g/l and adjusted calcium 2.8 mmol/l (reference range: 2.2–2.6 mmol/l). SPEP/IFE (serum protein electrophoresis and immunofixation electrophoresis) shows reduced IgG, IgM, IgA and serum free light chain ratio (SFLC) is ∼140 (kappa 2.840 mg/dl, lambda 25 mg/dl).

What is the diagnosis?
(a) The patient has monoclonal gammopathy of renal significance (MGRS) and should be referred to nephrology.
(b) The patient has multiple myeloma and should be referred urgently to haematology for treatment.
(c) A renal biopsy is necessary for diagnosis.
(d) The patient has monoclonal gammopathy of undetermined significance (MGUS).
(e) A bone marrow biopsy and whole-body MRI is absolutely necessary before diagnosis and treatment.

4. A 56-year-old man with proteinuric CKD3 but without diabetes is commenced in clinic on an SGLT2i. He is counselled appropriately about starting these medications.

Which of the following statements is correct?
(a) He requires monitoring of his renal function 2 weeks after starting the medication.
(b) He should stop SGLT2i once GFR <15 ml/min.
(c) In the absence of diabetes he is unlikely to experience any kidney protective effects.
5. Which statement best describes the results of the non-steroidal mineralocorticoid receptor antagonist (MRA) finerenone in recent trials in CKD?

(a) Finerenone reduces CKD progression and composite of major adverse cardiac events in diabetes and non-diabetes CKD.
(b) Finerenone reduces CKD progression and all-cause mortality in people with diabetes and CKD.
(c) Finerenone reduces CKD progression and composite of major adverse cardiac events in people with diabetes and CKD but was associated with an increase in hyperkalaemia-related adverse events.
(d) Finerenone reduces CKD progression and composite of major adverse cardiac events in people with diabetes and CKD with no increase in hyperkalaemia-related adverse events.
(e) The renal and cardiovascular benefits of finerenone were greatest in those additionally taking SGLT2i.

6. A 72-year-old man on continuous ambulatory peritoneal dialysis (CAPD) is seen on the medical assessment unit as he has noticed his fluid was cloudy when he drained out his last CAPD exchange. On examination, he is afebrile and has mild abdominal tenderness.

After sending a sample of dialysis effluent to microbiology, what is the most appropriate next step?

(a) Commence intravenous vancomycin.
(b) Arrange catheter removal.
(c) Wait for culture results to start antibiotics.
(d) Commence intraperitoneal vancomycin.
(e) Commence intravenous vancomycin and gentamicin.


Which is the most likely variant?

(a) Truncating IFT140 variant.
(b) MUC1 insertion variant.
(c) Missense UMOD variant.
(d) PKD2 variant.
(e) Truncating PKD1 variant.

8. A 50-year-old man has recently started on in-centre haemodialysis, having started dialysis unexpectedly following an acute illness from which he has made a full recovery. He is anuric having lost his residual kidney function. He is struggling with fatigue and hypotension after dialysis sessions, with significant weight gains over the long-dialysis gap, including two hospitalisation episodes with pulmonary oedema. He is motivated to self-care and does not have an immediate live-donor transplant option, though he is active on the transplant waiting list.

What is likely to offer the best approach to reducing his symptom burden and improving his quality of life?

(a) Continuing on in-centre haemodialysis until transplantation.
(b) Automated peritoneal dialysis (APD) to allow freedom during the day.
(c) Continuous ambulatory peritoneal dialysis.
(d) Home haemodialysis with short frequent dialysis sessions.
(e) Withdrawal of dialysis and transition to supportive care.

9. A 22-year-old man is referred to the kidney clinic with newly diagnosed hypertension, oedema and 4+ proteinuria on a dipstick. An echocardiogram shows no evidence of heart failure. There is no significant past medical history and he takes no regular medications. His mother was diagnosed with end-stage kidney disease in her 40s. His weight is 80 kg and his blood pressure is 154/86. Investigations reveal creatinine 120 umol/L, albumin 28 g/L and a urine protein:creatinine ratio of 440 mg/mmol. A kidney biopsy shows focal segmental glomerulosclerosis on light microscopy; electron microscopy was pending.

What is the most appropriate next step?

(a) Trial of prednisolone 60 mg and ramipril 10 mg for 6 weeks.
(b) Referral for genetic testing.
(c) Arranging for his mother to have a kidney biopsy.
(d) Fluid restriction.
(e) Start amlodipine 10 mg daily.

10. A 52-year-old man presents with slowly progressive renal impairment over 3 years and proteinuria. His eGFR has dropped from 68 ml/min/1.72m² 3 years ago to 47 ml/min/1.72m². He is asymptomatic and normotensive without significant previous illnesses. He does not take over-the-counter medications. On a urine dipstick test it is noted that he had glycosuria, microscopic haematuria and proteinuria. His HbA1c was normal and urine protein-to-creatinine ratio was 283 mg/mmol. He has normal Hb and calcium levels but his serum and bicarbonate levels are low. Due to the change in eGFR, an autoimmune screen has been sent. ANA and ANCA are negative and complement C3 and C4 level within normal range. SPEP/IFE (serum protein electrophoresis and immunofixation electrophoresis) show IgG kappa paraprotein 12 g/L with serum free light chain (SFLC) ratio of 20.

What should be done next?

(a) The patient has monoclonal gammopathy of undetermined significance (MGUS) and age-appropriate eGFR; no further action is needed.
(b) An urgent bone scan.
(c) The patient’s uPCR suggests AL amyloidosis and he should be referred urgently to haematology.
(d) Supplement phosphate, calcium and bicarbonate.
(e) Refer to nephrology for a renal biopsy.