



OXFORD SPECIALTY TRAINING

BEST OF FIVE MCQS FOR THE MRCP PART 1

Volume 3

Edited by
Iqbal Khan



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PREFACE

The Membership of the Royal College of Physicians (MRCP) is a mandatory exam for trainees in the UK intending to enter a career in a medical speciality. The MRCP exam has three parts: MRCP Part 1 (written paper); MRCP Part 2 (written paper); and MRCP Part 2 Clinical Examination (PACES).

The MRCP (UK) Part 1 Examination is designed to assess a candidate's knowledge and understanding of the clinical sciences relevant to medical practice and of common or important disorders to a level appropriate for entry to specialist training. Candidates must sit two papers, each of which is three hours in duration and contains 100 multiple choice questions in 'best of five' format. These are designed to test candidates' core knowledge, the ability to interpret information, and clinical problem solving. The MRCP Part 1 requires a huge breadth of information to be revised.

Whilst books and resources are available, there is a huge variation in the number and quality of practice questions available. Online revision websites can be very expensive and impractical for busy junior doctors in clinical posts. These three volumes have been written with these busy junior doctors in mind and are designed to be studied one volume at a time. The three volumes together cover the full syllabus of the MRCP part 1 exam, and the number of questions per speciality is proportional to that seen in the exam. It is suggested that doctors preparing for the exam should carry one of the books into work each day and use every opportunity to study, even if it is for brief intervals. When time permits a more detailed review of the subject should take place to ensure full understanding of each topic.

The questions have been written and reviewed by experts in their respective fields and I would like to use this opportunity to thank each and every one of them for their excellent contributions.

Iqbal Khan



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ABBREVIATIONS

μmol/L	micromoles per litre
A&E	Accident and Emergency
AAFB	acid-alcohol fast bacilli
ABG	arterial blood gas
ABPA	allergic bronchopulmonary aspergillosis
ACE	angiotensin-converting enzyme
AChR	acetylcholine receptor
ACR	American College of Rheumatology
ACTH	adrenocorticotrophic hormone
ADEM	acute disseminated encephalomyelitis
ADH	antidiuretic hormone
AF	atrial fibrillation
AIDP	acute inflammatory demyelinating polyradiculoneuropathy
AIDS	autoimmune deficiency syndrome
Alb	albumin
ALP	alkaline phosphatase
ALT	alanine aminotransferase
AMTS	abbreviated mental test score
ANA	antinuclear antibodies
ANCA	antineutrophil cytoplasmic antibodies
APKD	adult polycystic kidney disease
APTT	activated partial thromboplastin time
ARA	American Rheumatism Association
ARDS	acute respiratory distress syndrome
AST	aspartate amino transferase
BCG	bacille Calmette–Guérin
BD	bis in die
BIPAP	bilevel positive airway pressure
BM	blood glucose monitoring

BMD	bone mineral density
BMI	body mass index
BNF	British National Formulary
BODE	body mass index, airflow obstruction, dyspnea and exercise
BP	blood pressure
BPAD	bipolar affective disorder
bpm	beats per minute
BTS	British Thoracic Society
Ca ₂	calcium
CAH	chronic active hepatitis
CAM	Confusion Assessment Method
c-ANCA	cytoplasmic antineutrophil cytoplasmic antibodies
CAPD	continuous ambulatory peritoneal dialysis
CCP	cyclic citrullinated peptide
CF	cystic fibrosis
CFTR	cystic fibrosis transmembrane conductance regulator
CIDP	chronic inflammatory demyelinating radiculoneuropathy
CJD	Creutzfeld–Jakob disease
CMT	Charcot–Marie–Tooth
Cl	chlorine
CK	creatine kinase
CKD	chronic kidney disease
CLOX I	clock drawing test
CMV	cytomegalovirus
CN	cranial nerves
CNS	central nervous system
CO ₂	carbon dioxide
COPD	chronic obstructive pulmonary disease
CPAP	continuous positive airway pressure
CPP	calcium pyrophosphate
CPPD	CPP deposition
CPR	cardiopulmonary resuscitation
Cr	creatinine
CRAB	hypercalcemia, renal dysfunction, anaemia, and lytic bone lesions
CRP	C-Reactive Protein
CSF	cerebrospinal fluid

CT	computed tomography
CTG	cardiotocograph
CTPA	CT pulmonary angiography
CVST	cerebral venous sinus thrombosis
CXR	chest X-ray
DAS	disease activity score
DKA	diabetic ketoacidosis
DLCO	diffusion lung capacity for CO
DMD	Duchenne muscular dystrophy
DVLA	Driver and Vehicle Licensing Agency
DVT	deep vein thrombosis
DXA	dual energy x-ray absorptiometry
EBV	Epstein–Barr virus
ECG	electrocardiogram
ED	Emergency department
EEG	electroencephalogram
EGFR	epidermal growth factor receptor.
EMG	electromyogram
ENT	ear, nose, and throat
ESPS-2	European Stroke Prevention Study 2
ESR	erythrocyte sedimentation rate
FAST	Fast Alcohol Screening Test
FBC	full blood count
FDG-PET	fluorodeoxyglucose positron emission tomography
FEV	forced expiratory volume
FEV	forced expiratory volume in one second
FFP	fresh frozen plasma
FRS	first-rank symptoms
FSH	follicle stimulating hormone
FVC	forced vital capacity
GAA	glucosidase, alpha, acid
GABA	gamma-aminobutyric acid
GBM	glioblastoma multiforme
GBS	Guillain-Barré syndrome
GCS	Glasgow Coma Scale/Score
g/dL	grammes per decilitre

GDS	Geriatric Depression Score
GI	gastrointestinal
GN	glomerulonephritis
GORD	gastro-oesophageal reflux disease
GP	general practitioner
Hb	haemoglobin
HCO ₃	bicarbonate
HDU	high dependency unit
HIV	human immunodeficiency virus
HONK	hyperosmolar non-ketotic coma
HPO(A)	hypertrophic pulmonary osteoarthropathy
HPOA	hypertrophic pulmonary osteoarthropathy
HRCT	high-resolution computed tomography
HSV-2	Herpes simplex virus-2
HUS	haemolytic uremic syndrome
IBD	inflammatory bowel disease
ICS	inhaled corticosteroids
ICU	intensive care unit
IgA	immunoglobulin A
IgD	immunoglobulin D
IgE	immunoglobulin E
IgG	immunoglobulin class G
IgM	immunoglobulin class M
IIH	idiopathic intracranial hypertension
IM	intramuscular
INO	internuclear ophthalmoplegia
IPF	Idiopathic pulmonary fibrosis
IQ	intelligence quotient
INR	international normalized ratio
IP	intraperitoneal
IQCODE	Informant Questionnaire on Cognitive Decline in the Elderly
ITU	intensive treatment unit
IU/L	international unites per litre
IU/ml	international units per millimetre
IV	intravenous
IVIg	intravenous immunoglobulin

JC virus	John Cunningham virus
JVP	jugular venous pressure
K	potassium
kg	kilogram
kPa	kilo Pascal
LABA	long-acting beta agonist
LAMA	long-acting muscarinic antagonist
LFT	liver function test
LH	luteinizing hormone
LMN	lower motor neurone
LTOT	long-term oxygen therapy
LV	left ventricle
MAPK	mitogen-activated protein kinase
MAU	Medical Assessment Unit
mcg/l	microgram per litre
MCTD	mixed connective tissue disease
mg	milligramme
MG	myasthenia gravis
MHA	Mental Health Act
micromole/l	micromoles per litre
MLF	medial longitudinal fasciculus
mmol	millimols per litre
MMSE	Mini Mental State Examination
MND	motor neurone disease
mOsmol/kg	milliosmols per kg
MR	magnetic resonance; modified release
MRA	magnetic resonance angiography
MRC	Medical Research Council
MRI	magnetic resonance imaging
MRV	magnetic resonance venography
MS	multiple sclerosis
ms	milliseconds
MSU	mid-stream urine
MTP	metatarsalphalangeal
MU	million units
NA	sodium

NDMA	N-methyl-d-aspartate
NFI	Neurofibromatosis type I
NIV	non-invasive mechanical ventilation
NMO	neuromyelitis optica
NMS	neuroleptic malignant syndrome
NNT	number needed to treat
NPH	Neutral Protamine Hagedorn; normal pressure hydrocephalus
NSAID	nonsteroidal anti-inflammatory drug
NSCLC	non-small cell lung cancer
NSIP	non-specific interstitial pneumonitis
NSTEMI	non-ST-elevation myocardial infarction
O ₂	oxygen
OA	osteoarthritis
od	omni die
OPD	outpatient department
OSA	obstructive sleep apnoea
PaCO ₂	potential carbon dioxide
PACS	partial anterior circulation stroke
PAN	polyarteritis nodosa
pANCA	perinuclear anti-neutrophil cytoplasmic antibodies
PaO ₂	potential oxygen
PCR	polymerase chain reaction
PD	personality disorder
PDGF	platelet derived growth factor
PEF	peak expiratory flow
PEFR	peak expiratory flow rate
PFO	patent foramen ovale
pH	potential hydrogen
PML	progressive multifocal leukoencephalopathy
PO	per mouth
pO ₂	potential oxygen
PO ₄	phosphorus
POCS	posterior circulation stroke
PRN	pro re nata
PSA	prostate specific antigen
PSP	progressive supranuclear palsy

PT	prothrombin time
PTH	parathyroid hormone
RA	rheumatoid arthritis
RAPD	relative afferent pupillary defect
RAST	RadioAllergoSorbent Testing
RCP	Royal College of Physicians
REM	rapid eye movement
RF	rheumatoid factor
rINN	recommended International Non-Proprietary Name
RIOTT	Randomised Injectable Opiate Treatment Trial
RNA	ribonucleic acid
RTA	road traffic accident
SABA	short-acting B-agonist
SAH	subarachnoid haemorrhage
SCLE	subacute cutaneous lupus erythematosus
SHO	senior house officer
SIADH	syndrome of inappropriate antidiuretic hormone
SLE	systemic lupus erythematosus
SpO ₂	peripheral capillary oxygen saturation
SS	Sjögren's syndrome
SSRI	selective serotonin reuptake inhibitor
SUNCT	short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing
TA	temporal arteritis
TAC	trigeminal autonomic cephalgia
TACS	total anterior circulation stroke
TB	tuberculosis
TDS	ter die sumendum
TENS	transcutaneous electrical nerve stimulation
TGA	transient global amnesia
TIA	transient ischaemic attack
TIPs	transjugular intrahepatic portosystemic shunt
TLCO	transfer factor of the lung for carbon monoxide
TNF	tumour necrosis factor
TOE	trans-oesophageal echocardiography
tPA	tissue plasminogen activator
TSH	thyroid stimulating hormone

TTP	thrombotic thrombocytopenic purpura
U&E	urea and electrolytes
UEC	uterine endometrial carcinoma
U/l	units per litre
UMN	upper motor neuron
USS	ultrasound scan
UTI	urinary tract infection
VEGF	vascular endothelial growth factor
VF	ventricular fibrillation
VGCC	voltage-gated calcium channel antibodies
VGKC	voltage-gated potassium channel antibodies
VGNC	voltage-gated sodium channel antibodies
VGHC	voltage-gated hydrogen channel antibodies
VIP	vasoactive intestinal peptide
VQ	ventilation/perfusion scan
vWf	von Willebrand factor
VZV	varicella zoster virus.
WBC	white blood cell count
WCC	white cell count
WFNS	World Federation of Neurological Surgeons

1. **What is the prevalence of Alport's syndrome?**
 - A. 1 in 10000
 - B. 1 in 5000
 - C. 1 in 2500
 - D. 1 in 1000000
 - E. 1 in 100000

2. **A 62-year-old man on chronic haemodialysis for the management of end-stage renal failure secondary to polycystic kidneys is seen for review. His current medication include alfacalcidol, simvastatin, lanthanum carbonate, and felodipine. X-ray of his hands shows changes of osteitis fibrosa cystica. His blood tests show: serum calcium 2.6 mmol/l, serum phosphate 1.7 mmol/l, alkaline phosphatase 321 IU/l, PTH 86 pmol/l (normal range 1–9 pmol/l). What is the most appropriate treatment for his hypercalcaemia?**
 - A. Stop alfacalcidol
 - B. Discontinue lanthanum carbonate
 - C. Start cinacalcet
 - D. Refer for parathyroidectomy
 - E. Increase alfacalcidol

- 3. A 63-year-old man sustained a myocardial infarct. Echocardiography showed poor left ventricular function and he was started on perindopril, furosemide in addition to aspirin and simvastatin. His serum creatinine on admission to the coronary care unit was 134 micromol/l. He was seen in follow-up two weeks post discharge as he had felt unwell. Routine blood tests showed a serum creatinine of 356 micromol/l and serum potassium was 5.9 mmol/l. What is the next most appropriate investigation to determine the aetiology of his deteriorating renal function?**
- A. Coronary angiography
 - B. Echocardiography
 - C. Renal arteriography
 - D. Renal ultrasound
 - E. Renal biopsy
- 4. What is the commonest form of glomerulonephritis in adults worldwide?**
- A. Minimal change nephropathy
 - B. Focal segmental glomerulosclerosis
 - C. Mesangiocapillary glomerulonephritis
 - D. IgA nephropathy
 - E. Antiglomerular basement membrane disease
- 5. A 38-year-old diabetic with type I diabetes (diagnosis at the age of 12) presents with right loin pain and investigations reveal urea 32 mmol/l and serum creatinine 521 micromol/l with a serum potassium of 6.7 mmol/l. She had previously had a left nephrectomy following trauma. She was catheterized and found to be anuric. A plain abdominal X-ray showed no urolithiasis. What is the cause of her renal failure?**
- A. Bladder tumour
 - B. Diabetic nephropathy
 - C. Papillary necrosis
 - D. Renal vein thrombosis
 - E. Retroperitoneal fibrosis
- 6. You have been asked to see a 43-year-old man because of electrolyte disturbance. He had a past history of multiple sclerosis and suffered from ataxia, numbness of his left leg, and trigeminal neuralgia. Investigations: serum sodium 121 mmol/l, serum potassium 3.7 mmol/l, urea 2.9 mmol/l, serum creatinine 99 micromol/l. What is the cause of his electrolyte disturbance?**
- A. Adrenal insufficiency
 - B. Psychogenic polydipsia
 - C. Renal tubular acidosis
 - D. Salt depletion
 - E. Syndrome of inappropriate secretion of antidiuretic hormone

7. **A 32-year-old woman who is being managed by her GP for joint pains and lethargy comes to the renal clinic. On examination she is hypertensive at 165/90 and looks pale. Investigations: haemoglobin 10.2 g/dl (11.5–16.5), white cell count $12.3 \times 10^9/l$ (4–11), platelets $151 \times 10^9/l$ (150–400), serum sodium 139 mmol/l (135–146), serum potassium 4.9 mmol/l (3.5–5), creatinine 154 micromol/l (79–118); urine: blood ++, protein +; renal biopsy: positive staining for complement, IgM, and IgG. Which of the following is the most likely diagnosis?**
- A. IgA nephropathy
 - B. Minimal change disease
 - C. Post streptococcal glomerulonephritis
 - D. Systemic lupus erythematosus
 - E. Wegener's granulomatosis
8. **A 35-year-old man presents with hypertension, but is otherwise well. His father died of a cerebral bleed at the age of 46 but his mother is alive and well on no medication. Investigations: urea 12 mmol/l, serum creatinine 231 micromol/l, and haemoglobin 14.4 mg/l. What is the likely cause of his renal impairment and hypertension?**
- A. Adult polycystic kidney disease.
 - B. Focal segmental glomerulosclerosis
 - C. IgA nephropathy
 - D. Reflux nephropathy
 - E. Tuberose sclerosis
9. **A 70-year-old man has multiple medical problems including epilepsy, atrial fibrillation, and left ventricular failure. He is admitted after an acute diarrhoeal illness and has a rapid rise in his creatinine to 220 micromol/l. The protein binding of which of the following drugs is likely to be significantly altered?**
- A. Bisoprolol
 - B. Phenytoin
 - C. Felodipine
 - D. Indapamide
 - E. Atorvastatin

- 10. You are asked to see a 71-year-old man who has a history of benign prostatic hypertrophy and was admitted 24 hours previously with a urinary tract infection. He also has a history of type 2 diabetes and takes a range of medication including gliclazide, pioglitazone, ramipril, and amlodipine. He is initially treated with gentamycin and you are asked to review his renal status. His BP on examination is 105/63, his pulse is 88 and regular. Investigations: Hb 11.7 g/dl, WCC $14.3 \times 10^9/l$, PLT $232 \times 10^9/l$, Na^+ 138 mmol/l, K^+ 5.4 mmol/l, creatinine 262 micromol/l (151 some 3 weeks earlier), urinary sodium 7, glucose 10.4 mmol/l, trough gentamicin level 2.6 mg/l. Which of the following is the most likely cause of her renal impairment?**
- A. Acute tubular necrosis
 - B. Interstitial nephritis
 - C. Renal vein thrombosis
 - D. Pre-renal failure
 - E. Post-renal failure
- 11. A 75-year-old man has a productive cough with specks of blood in the sputum. Chest X-ray reveals a mass lesion in the L lower zone. Na 110 mmol/l (137–144), K 4.0 mmol/l (3.5–4.9), bicarbonate 24 mmol/l (20–28), U 3.0 mmol/l (2.5–7.5), Cr 80 micromol/l (60–110). Which of the following suggests a diagnosis of syndrome of inappropriate anti-diuretic hormone (SIADH)?**
- A. Presence of ascites
 - B. Plasma osmolality 236 mOsm/kg (278–305)
 - C. Urine flow rate 20 ml/h
 - D. Urine osmolality 250 mOsm/kg (350–1000)
 - E. Urine sodium 110 mmol/l
- 12. A 22-year-old man presents to the emergency department complaining of left loin pain. He tells you his GP has recently started investigating him for hypertension and that his father has chronic renal failure. On examination he has obvious bilateral renal masses, pain on the left-hand side to palpation and a raised BP of 155/90. Investigations: haemoglobin 10.9 g/dl (13.5–17.7), white cell count $8.0 \times 10^9/l$ (4–11), platelets $222 \times 10^9/l$ (150–400), serum sodium 142 mmol/l (135–146), serum potassium 4.7 mmol/l (3.5–5), creatinine 139 micromol/l (79–118), urine: haematuria ++. Which of the following is the most likely cause of his pain?**
- A. Renal artery embolus
 - B. Renal vein thrombosis
 - C. Haemorrhage into a renal cyst
 - D. Interstitial nephritis
 - E. Acute tubular necrosis

- 13. A 52-year-old man is receiving cisplatin-based chemotherapy for colonic carcinoma with hepatic metastases. He has begun to feel rather tired and has been suffering from increasing muscle cramps and palpitations. Bloods reveal a mild anaemia with a haemoglobin of 9.9 g/dl, but his routine U&E are normal. Which one of the following deficiencies is most likely to be responsible for his symptoms?**
- A. Magnesium
 - B. Sodium
 - C. Chloride
 - D. Phosphate
 - E. Thyroxine
- 14. A 33-year-old man who is under investigation by his GP for a chronic cough comes to the clinic for review because he is developing pitting oedema of both lower limbs, he also feels increasingly nauseous. On examination his BP is elevated at 155/92, his pulse is 80 and regular. There are fine crackles on auscultation of the chest, splenomegaly, and bilateral pitting oedema. Investigations: haemoglobin 12.5 g/dl (13.5–17.7), white cell count $9.0 \times 10^9/l$ (4–11), platelets $181 \times 10^9/l$ (150–400), serum sodium 140 mmol/l (135–146), serum potassium 4.6 mmol/l (3.5–5), creatinine 130 micromol/l (79–118), calcium 3.1 mmol/l (2.2–2.6); ultrasound: two normal-sized kidneys; CXR: interstitial fibrosis; 24-hour urinary protein 2.5 g (<300 mg). Which of the following is the most likely cause of his proteinuria?**
- A. Minimal change disease
 - B. Membranous nephropathy
 - C. Crescentic glomerulonephritis
 - D. Sarcoidosis
 - E. Wegener's granulomatosis
- 15. A 72-year-old man is admitted to the hospital with acute urinary retention. He has a history of previous inferior myocardial infarction and hypertension but is otherwise well. On examination he has a BP of 155/92, a pulse of 90 regular, and is in some pain. He has a large bladder on palpation of his abdomen and a smoothly enlarged prostate on PR. Investigations: Hb 12.9, WCC 8.9, PLT 203, Na 139, K 5.4, Cr 192. He is catheterized. Which of the following is the most appropriate next step?**
- A. Early transurethral prostatectomy
 - B. Initiation of alpha blockade
 - C. Initiation of anti-androgen therapy
 - D. Removal of catheter after three days
 - E. Teaching on managing a permanent catheter

16. Which one of the following statements is true with respect to renal carcinoma?

- A. It often presents with haematuria
- B. More than 25% of patients present with the classic triad of haematuria, flank pain, and a palpable abdominal mass
- C. Anaemia is observed in up to 20% of patients at presentation
- D. It is commonly associated with secondary amyloidosis
- E. Patients with von Hippel–Lindau syndrome, tuberous sclerosis or Peutz–Jeghers syndrome are at increased risk of renal cell carcinoma

17. A patient with hepatitis B develops nephrotic syndrome. He has a renal biopsy, which reports thickening of the glomerular capillary wall, and subepithelial immune complex deposition. Which of the following conditions fits best with this picture?

- A. Minimal change glomerulonephritis (GN)
- B. Mesangiocapillary GN
- C. Medullary sponge kidney
- D. Membranous GN
- E. IgA nephropathy

18. You are reviewing a 71-year-old man with CKD stage 5 who has suffered an inferior myocardial infarction. You are reviewing his cardiovascular drugs. His BP is 155/92, his total cholesterol is 7.1. You decide to start additional medication for blood pressure and cholesterol lowering. Which of the following drugs is used at potentially submaximal dose in CKD-5, but need not be avoided completely?

- A. Atorvastatin
- B. Pravastatin
- C. Simvastatin
- D. Rosuvastatin
- E. Doxazosin

19. A 62-year-old man with chronic renal failure comes to the clinic for review. He has type 1 diabetes and has been under the management of the renal physicians for the past four years. Current symptoms include nausea and lethargy. On examination his BP is 155/82, pulse is 78 and regular. Chest is clear and abdomen is soft and non-tender. Investigations: Hb 11.0, WCC 7.0, PLT 181, Na 137, K 5.3, Cr 220, Ca 2.25, PO₄ 1.9. Which of the following is the most appropriate treatment to reduce his phosphate?

- A. Sevelamer
- B. Risedronate
- C. Resonium
- D. Cinacalcet
- E. Calcium carbonate

- 20. When assessing patients with renal stones which of the following abnormalities are regarded as protective against renal stone formation?**
- A. Hypercalcaemia
 - B. Hypercalciuria
 - C. Hyperuricaemia
 - D. Hypercitraturia
 - E. Hyperuricosuria
- 21. A 39-year-old woman who has been treated for heavy proteinuria secondary to idiopathic membranous glomerulonephritis presented with right flank pain and haematuria. The renal function was mildly impaired. While in hospital she developed acute shortness of breath and haemoptysis. The most likely cause of the respiratory complaint is?**
- A. Pulmonary embolism
 - B. Primary bronchial carcinoma
 - C. Idiopathic pulmonary haemosiderosis
 - D. Pulmonary tuberculosis
 - E. Staphylococcus pneumonia
- 22. Struvite kidney stones are invariably associated with urinary tract infections, specifically urease-producing bacteria. Which of the following bacteria is often implicated?**
- A. *Proteus*
 - B. *Escherichia coli*
 - C. *Streptococci*
 - D. *Enterococci*
 - E. *Citrobacter*
- 23. A man has developed end-stage renal failure at the age of 30. He is also found to have sensorineural deafness. The ophthalmologist detected a regular conical protrusion on the anterior aspect of the lens on slit lamp examination. What is the likely diagnosis?**
- A. Ehler's Danlos syndrome
 - B. Marfan's syndrome
 - C. Polycystic kidney disease
 - D. von Hippel–Lindau syndrome
 - E. Alport's syndrome

- 24. A 47-year-old man with a long-standing history of severe back pain and stiffness presents with ankle swelling. Investigations are: urea 8.8 mmol/l, serum creatinine 143 micromol/l, total protein 47 g/l, albumin 21 g/l, other liver function tests normal. What is the cause of his hypoalbuminaemia?**
- A. Amyloidosis
 - B. Coeliac disease
 - C. Membranous glomerulonephritis
 - D. Myeloma
 - E. Protein-losing enteropathy
- 25. A man has developed end-stage renal failure at the age of 30. He is also found to have sensorineural deafness. The ophthalmologist detected regular conical protrusion on the anterior aspect of the lens on slit lamp examination. Which type of collagen does the genetic mutation affect?**
- A. Type I
 - B. Type II
 - C. Type III
 - D. Type IV
 - E. Type V
- 26. A 24-year-old man is seen in the renal clinic for resistant hypertension. He is currently managed with an ACE inhibitor, indapamide, and felodipine. His BP in the clinic is 159/92. There are bilateral ballotable masses on palpation of the abdomen. His creatinine is elevated at 184 micromol/l and there is haematuria ++ on dipstick testing. Which of the following conditions may also be seen in the presence of his renal diagnosis?**
- A. Pancreatitis
 - B. Cirrhosis
 - C. Diabetes mellitus
 - D. Mitral valve prolapse
 - E. Aortic regurgitation
- 27. A 35-year-old woman with chronic renal failure related to diabetic nephropathy from long-standing type 1 diabetes comes to the clinic for review and possible intervention for her anaemia. A most recent Hb was 9.8 g/dl and creatinine 187 micromol/l. According to NICE guidelines on anaemia management, which of the following is?**
- A. Maintain Hb in the 11–13 range
 - B. Consider another cause for anaemia if the GFR is >60 ml/min
 - C. Prescribe concomitant vitamin C. for treatment of anaemia
 - D. Measure Epo levels as a marker of successful treatment
 - E. Blood transfusion is an important option in those who may undergo a renal transplant

- 28. A 67-year-old man with known amyloidosis (secondary to ankylosing spondylitis) presents with severe left loin pain. Investigations reveal: urea 15.4 mmol/l, serum creatinine 212 micromol/l, serum albumin 18 g/l. What is the likely cause for his pain?**
- A. Acute pyelitis
 - B. Perinephric haematoma
 - C. Renal amyloidosis
 - D. Renal artery thrombosis
 - E. Renal vein thrombosis
- 29. A 78-year-old woman is admitted after being found on the floor by her home help. She has apparently been lying there for a number of hours after suffering a stroke. On admission she is drowsy, with obvious evidence of a left-sided hemiparesis. She has bilateral basal crackles on auscultation of the chest. Investigations: Hb 12.3g/dl (11.5–16.0), WCC $12.5 \times 10^9/l$ (4–10), PLT $233 \times 10^9/l$ (150–400), sodium 142 mmol/l (134–143), potassium 5.9 mmol/l (3.5–5), creatinine 237 micromol/l (60–120), urine blood +++. Chest X-ray reveals some evidence of fluid accumulation, although this is not particularly marked. Which of the following is the best initial way to treat her renal impairment?**
- A. Alkaline diuresis
 - B. Furosemide
 - C. Normal saline
 - D. Haemofiltration
 - E. Haemodialysis
- 30. A 51-year-old publican with alcoholic liver disease comes to the clinic with a deterioration, suffering from increasing nausea over the past few days. He is currently managed with high-dose propranolol for portal hypertension and spironolactone for ascites. On examination his BP is 100/60, his pulse is 85 and regular. He has extensive ascites and multiple signs consistent with chronic liver disease. Investigations: haemoglobin 10.1 g/dl (13.5–18), white cell count $7.2 \times 10^9/l$ (4–10), platelets $104 \times 10^9/l$ (150–400), sodium 141 mmol/l (134–143), potassium 5.3 mmol/l (3.5–5), creatinine 182 micromol/l (60–120). He is catheterized but only passes 80 ml of urine over the course of four hours. Urine sodium is <10 mmol/l. Which of the following is the most likely diagnosis?**
- A. Hepatorenal syndrome
 - B. Spontaneous bacterial peritonitis
 - C. Acute GI haemorrhage
 - D. Acute tubular necrosis
 - E. Renal tubular acidosis