



Revise Nephrology

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1st set of Pre-MCQs 2023

Q1. A 70-year-old man undergoes coronary stenting for worsening angina and paroxysmal AF. He is anticoagulated with warfarin following the procedure. Serum creatinine is 105 $\mu\text{mol/L}$ four days following his angiogram at the time of discharge (98 $\mu\text{mol/L}$ at admission). Three weeks after discharge he presents to his local medical officer feeling increasingly fatigued. A mottled rash (livedo reticularis) is noted on his lower legs and abdomen.

His blood tests are as follows:

FBC

Hb 109g/L MCV 92fL

Plt $451 \times 10^9/\text{L}$

WBC 12.5 (Neut 10.6, Lym 1.0, Eos 0.8, Bas 0.1)

EUC

Na 140mM

K 6.2mM

Cl 115mM

HCO₃ 21mM

Urea 38.6mM

Creat 650 $\mu\text{mol/L}$

What is the most likely explanation?

- A. Acute interstitial nephritis
- B. Cholesterol atheroemboli
- C. Membranous glomerulonephritis
- D. Contrast nephropathy

Q2. Which of the following is an indication for urgent hemodialysis in a patient with AKI who has just presented to ED?

- A. Serum creatinine of 920 $\mu\text{mol/L}$
- B. K of 7.1
- C. Serum HCO₃ 18 mM
- D. Pericardial rub
- E. Urea of 66 mM

Q3. A 46-year-old male is involved in an MVA, following which he undergoes extensive surgery including a laparotomy for suspected ruptured bowel and decompression surgery on his legs from compartment syndrome. He receives multiple antibiotics including gentamicin and ampicillin. Ten days later, after discharge to the general ward, he develops a rapidly rising serum creatinine. His urine output is more than 1L per day. Obstruction is excluded on a renal ultrasound examination. Investigations done in the context of the AKI show normal FBC and no cells in the urine.

The most likely cause of his AKI is:

- A. Penicillin related acute interstitial nephritis (AIN)
- B. Rhabdomyolysis
- C. Hypovolaemia related to his injuries.
- D. Aminoglycoside-related acute tubular necrosis.
- E. Intratubular calcium deposition.

Q4. A 70-year-old man with a history hypertension has a CT abdomen for investigation of abdominal pain. There is an incidental finding of 70% right renal artery stenosis. His BP is 154/94 mm Hg, and his current medications are perindopril 10mg daily and amlodipine 10mg daily).

What is the best course of management?

- A. Continue current therapy
- B. Add hydrochlorothiazide
- C. Change amlodipine to metoprolol
- D. Renal artery angioplasty
- E. Renal sympathetic denervation

Q5. A 40-year-old female with a history of gastro-oesophageal reflux managed with high-dose pantoprazole is admitted with severe hypertension and AKI (creatinine 315 $\mu\text{mol/L}$). Potassium and bicarbonate are in the normal range. She has a history of Raynaud's and you note peripheral telangiectasia. Urinalysis is bland and the full blood count shows normochromic normocytic anaemia with a platelet count of $115 \times 10^9 /\text{L}$ [150–400]. The renal ultrasound is normal.

What is the most likely cause of her hypertension and AKI?

- A. Acute interstitial nephritis (AIN)
- B. Conn syndrome.
- C. Pheochromocytoma.
- D. Systemic lupus erythematosus.
- E. Systemic sclerosis.

Q6. The following electrolyte profile may be associated with both thiazide and loop diuretics:

- A. Hyperkalaemia with metabolic alkalosis
- B. Hypokalaemia with metabolic alkalosis
- C. Hyperkalaemia with metabolic acidosis
- D. Hypokalaemia with metabolic acidosis
- E. Hyperkalaemia and ...phew I am confused....

Q7. Primary hyperaldosteronism is characterised by-

- A. Hypokalaemia
- B. Hyperkalaemia
- C. Metabolic alkalosis
- D. Metabolic acidosis
- E. a and c

Q8. Fanconi syndrome should be suspected in-

- A. High anion gap metabolic acidosis
- B. Hyperphosphatemia
- C. Hypophosphatemia
- D. Hyperkalemia

Q9. A 49-year-old woman with no previous medical history presents with BP of 180/100 mm Hg and hypokalaemia with alkalosis. Which of the following is unlikely to have led to this condition?

- A. Gitelman syndrome
- B. Liddle syndrome
- C. Unilateral renal artery stenosis
- D. Primary aldosteronism

Q10. Which of the following statement is true about Polyarteritis Nodosa (PAN) -

- A. Can affect both arteries and veins
- B. Is ANCA positive in 30 % cases
- C. Kidney involvement manifests as glomerulonephritis
- D. Characterised by absence of vasculitis in veins
- E. Can affect both large and small blood vessels

Q11. The commonest clinical manifestation of PAN is-

- A. Abdominal pain
- B. Testicular pain
- C. Haemoptysis
- D. Hypertension
- E. Peripheral neuropathy

Q12. The most important risk factor for the development of post-transplant lymphoproliferative disorder (PTLD) in a solid organ transplant patient is-

- A. Epstein-Barr virus mismatch between host and recipient
- B. Kidney transplant
- C. Previous infection with cytomegalovirus (CMV)
- D. High serum creatinine
- E. Use of alemtuzumab (an anti-CD52 antibody)

Q13. Which of the following is the leading cause of AKI in patients with liver disease?

- A. Pre-renal AKI
- B. Glomerulonephritis
- C. AKI associated with infection e.g., sepsis or SBP
- D. Hepatorenal syndrome (HRS)
- E. Obstructive uropathy

Q14. Which of the following is true about membranous nephropathy (MN)?

- A. It is a common cause of nephrotic syndrome and ESRF in children
- B. It is caused by auto-antibodies to C3 convertase called C3 nephritic factor
- C. The characteristic biopsy finding is presence of "spikes" in the GBM on silver methenamine stain.
- D. Immunosuppressive treatment is recommended in those with persistent sub-nephrotic range proteinuria.
- E. It is the commonest cause of nephrotic syndrome in people of African origin.

Q15. The commonest manifestation of renal involvement in amyloidosis is:

- A. Hematuria
- B. Hyaline casts
- C. Eosinophilia
- D. Proteinuria
- E. White cell casts